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Army Active/Reserve Mix

Force Planning for Major Regional Contingencies

Ronald E. Sortor

Arroyo Center

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PREFACE

National military strategy is changing the focus of military planning to include a broader range of missions, spanning the spectrum from major regional contingencies (MRCs) to operations other than war. This change places additional demands on the Army, affecting the required mix of active and reserve component forces. Planning for MRCs has presumed reliance on the active component for early-deploying combat forces, and ready access to the reserve components for the bulk of support forces. However, for operations other than war—such as Somalia, Haiti, and potentially the Balkans or other trouble spots—the Army may not be able to call on the reserve components for frequent or extended deployments. Nor may the active component be able to support these missions while maintaining a ready MRC capability and meeting its other constraints. These conflicting demands lead to a key planning question: How should the active and the reserve components be structured to meet the Army's evolving requirements?

This report documents results from the first phase of RAND research on the above question. That research aims to examine a range of possible future requirements for military forces and to analyze how such requirements might be met by alternative active/reserve structures. This report describes the first portion of the research, which has focused on the forces required for major regional contingencies and the adequacy of Army forces that are planned for the late 1990s and early 21st century.

This research was carried out under a RAND project entitled "Implications of Changing National Security Strategy for Army Active-

Reserve Mix," sponsored by the Commanding General, U.S. Army Forces Command. The research was conducted in the Manpower and Training Program of RAND's Arroyo Center, a federally funded research and development center sponsored by the United States Army.

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SUMMARY

The national military strategy and the Army force structure have both been undergoing rapid and large changes since the late 1980s. Since the fall of the Berlin Wall and the decline of the Soviet threat, there have been two official reexaminations of the U.S. military strategy and the forces needed to carry it out. The first resulted in a planned "Base Force" and the second in the "Bottom-Up Review" (BUR) force. In terms of strategy, the two are very similar. Each emphasized regional threats and the need to size conventional forces for major regional contingencies (MRCs). Each posited the need to be able to fight and win two nearly simultaneous MRCs as a primary planning objective. This report examines the forces required for such major regional contingencies and the capability of the evolving Army force structure to meet those requirements. It focuses particularly on the mix of forces in the Army's active component versus its two Reserve Components (RC).[1]

PLANNED COMBAT AND SUPPORT FORCES

Under the BUR, the Army force structure is to decrease from twenty-eight divisions (eighteen active and ten reserve) in 1990 to eighteen divisions (ten active and eight reserve). In terms of military personnel, the Army will go from 1,486,000 (732,000 active and 754,000 reserve) to 1,070,000 (495,000 active and 575,000 reserve). The active

[1]The Army RC include the Army National Guard (ARNG) and the U.S. Army Reserve (USAR).

Army combat force structures included in the Base Force and the Bottom-Up Review differ only slightly.

In terms of combat elements, the BUR active force includes two fewer division headquarters than the Base Force, but because of a restructuring of the divisions, this represents a reduction of only two maneuver brigades. The RC combat structure, however, is larger by twelve brigades under the BUR than under the Base Force. This difference arises in part because the BUR included fifteen high-priority ARNG "enhanced readiness brigades," which replaced seven roundout/roundup brigades under the Base Force.

Although public attention is most often focused on the combat elements of the reserve forces—particularly the high-priority enhanced brigades—it is the RC support units that play the most critical role very early in any contingency. For example, 7,000 personnel from RC support units have been identified to deploy in 30 days in support of a three-division contingency force and more than 108,000 to deploy in support of a five-division force within 75 days (Peay, D'Araujo, and Baratz, 1994).

In recognition of the importance of the support forces and the severe constraint on resources for training the force, the Army has implemented a "contingency force pool" (CFP) concept for support units needed early in major contingency operations. These CFP units, both active (a total of 77,600 personnel) and reserve (a total of 113,400 personnel), are intended, along with forward-deployed forces, to support the deployed active combat force and any augmentation from the ARNG enhanced brigades.

EVALUATING THE PLANNED FORCES

This report focuses on the adequacy of the evolving Army force structure, both active and reserve, to meet timetables for preparing combat and support forces to meet requirements of the MRCs. Three cases are examined in some detail:

- Two separate MRCs, each requiring four to five divisions;
- An MRC requiring reinforcement up to a total of eight divisions;

- Two nearly simultaneous MRCs requiring a total of eight to ten divisions.

Using empirical estimates for how long it takes to prepare RC units for deployment after mobilization and a force mix methodology developed in previous RAND research, we compare the requirements for various regional contingencies to the planned mix and composition of the BUR force.

Our analysis shows that under the assumption that only four to five divisions are needed for each major regional contingency, the BUR combat force is adequate even when judged against a scenario with two nearly simultaneous contingencies of this size. However, unlike the case for the combat forces, the planned support force structure would not provide the number of units at the needed readiness level to support these same contingencies.

ADEQUACY OF SUPPORT FORCES

Single-Contingency Scenario

For a single Southwest Asia MRC requiring no more than four to five divisions and where mobilization occurs at C-day, the active component would be required to provide about 37,000 of the total 180,000-person support force requirement, and the RC could provide the remaining 143,000. The planned mix of active and RC units in the CFP totals about 193,500 personnel (77,600 active and 113,700 reserve) and would, in the aggregate, be able to meet this requirement.

If, however, mobilization is delayed for twenty days and occurs at C+20, as was the case in the Persian Gulf War, the RC can be expected to meet only about 70,000 of the requirement, with the active component needing to provide 110,000 support personnel. In this event there would not be sufficient active forces in the CFP to meet the requirement. For the planned force to provide the required support structure in terms of size and mix for a single MRC requiring four to five Army divisions, RC support units must be made available at or very soon after initial deployment of combat forces.

There is also a mismatch in the type of units, with some shortages existing in the CFP for units from the transportation, quartermaster,

military intelligence, medical, adjutant general, and composite services branches. We believe the shortages, particularly in transportation and quartermaster, are largely due to the CFP being sized to support Army units but not to meet the Army's wartime executive agency requirement to support the other services. Executive agency requirements could be as large as 20,000 to 60,000, depending on the size of the deployment and the availability of contract or host nation support.

Reinforced and Multiple-Contingency Scenarios

For an MRC requiring reinforcement of combat and support forces (up to a total of eight combat divisions) or for two near-simultaneous MRCs, the Army would need to draw on support units from the general war forces. This could make an additional 188,900 RC personnel available (virtually all CONUS-based active component support units are in the CFP). Even if it is assumed that many of these general war force units would be of the correct type, it is not at all certain they could be readied for deployment in time to meet the in-theater requirements, given their lower priority for resources in peacetime.

Both the ARNG and the USAR plan to give their general war forces a lower priority for resources than their CFP units. The ARNG, for example, plans to man its high-priority CFP units at 95 percent but will man the lower-priority units at 85 percent. Even RC units in the CFP find it difficult to meet their readiness goals. Less than a third of the priority support units participating in the Army's Bold Shift program in 1993 were able to meet their peacetime training goals, and on average, the units reported they would require about 20 days of post-mobilization training before they would be prepared to deploy.

Personnel readiness—having sufficient numbers of qualified people available to mobilize and deploy—is the primary constraint for these types of support units in meeting early-deployment requirements. Priority support units in 1992 and 1993 had only about 75 percent of their personnel skill qualified. In the Persian Gulf War, these types of units were brought to required readiness levels by cross-leveling personnel between units and assigning additional personnel from other sources. At that time, however, the Army enjoyed a large, robust, well-trained, and resourced force to draw from. That is likely not to be the case in the future.

ADEQUACY OF COMBAT FORCES

To meet the requirements of MRCs planned in the BUR, the proposed Army force structure would contain sufficient combat elements (ten active divisions with three brigades each, augmented by up to fifteen ARNG enhanced brigades if needed). The most demanding of these requirements would occur in the two-MRC scenario with four to five divisions in each, but even there the Army will have enough combat power at its disposal if the active divisions forward deployed in Europe are available for out-of-theater contingencies and the ARNG enhanced brigades are available for deployment.

Problems could arise, however, if the Army needed to send more combat forces to the first MRC than the planning assumption of four to five divisions. In that case, additional combat force might be needed quickly for a second contingency (or for a strategic reserve in the United States). There is some question about whether the ARNG enhanced brigades could be readied quickly enough in such a situation. While the Army's goal is to have enhanced brigades ready for deployment 90 days after mobilization, previous RAND research indicates this may be extremely difficult to achieve and would probably take between 100 and 130 days.

The Army does have several planning options for such a situation. It might invest more in peacetime training or postmobilization training in order to generate fully trained brigades more quickly. Or it might use additional equipment to eliminate the preparation and shipping time for moving a brigade's equipment to the theater and thus speed its arrival. On the other hand, it might plan to accept a delay in delivery of the enhanced brigades to the theater; for some scenarios a delay of 40 days may not be critically important (for example, if the enhanced brigades replace active brigades as part of a planned rotation of units in a stalemated situation, or if they are part of an overwhelming force for a planned offensive operation).

IMPLICATIONS

In summary, our analysis shows that under current planning assumptions, the BUR combat force is adequate even when judged against a scenario with two nearly simultaneous contingencies. However, unlike the case for the combat forces, it does not appear

that the planned support force structure would provide the required number of units at the needed readiness level to support anything beyond a single modest-sized contingency. Support units other than those in the CFP do exist in the general war forces; however, given their lack of priority for resources, they may not be ready to deploy in time. This suggests a need to reexamine the support force configuration and reassess readiness in support units.

While personnel readiness is the primary constraining factor in RC readiness, active units have a different problem. With a smaller force structure and growing demands for operations short of major regional contingencies, the Army may not be able to maintain a contingency force that is sufficiently trained and ready to deploy to a major regional contingency that may occur with little notice. The BUR explicitly identified military operations other than war as objectives to be addressed by the armed forces. Recent examples include operations carried out in Somalia, Macedonia, and for many years in the Sinai.

The number, duration, and characteristics of such operations other than war could place demands on the Army force structure that would degrade the readiness of the active component forces below desired levels. The Army needs to examine a range of such operations and consider alternative approaches to them, including possible use of the RC, to develop ways to meet their requirements while preserving readiness for MRCs.

ACRONYMS AND ABBREVIATIONS

AA	Air Assault
Abn	Airborne
AC	Active Component
ACR	Armored Cavalry Regiment
AG	Adjutant General
APOE	Aerial Port of Embarkation
AR	Armor
ARNG	Army National Guard
ASMP	Army Strategic Mobility Plan
AT	Annual Training
AUSA	Association of the U.S. Army
AV	Aviation
BUR	Bottom-Up Review
C-day	Day deployment operations commence
CAA	Concepts Analysis Agency
CFP	Contingency Force Pool
CINCCENT	Commander in Chief, Central Command
CM	Chemical
CONUS	Continental United States
CRF	Contingency Response Force
CS	Combat Support
CSS	Combat Service Support

DAIG	Department of the Army Inspector General
DoD	Department of Defense
EAC	Echelons Above Corps
EAD	Echelons Above Division
EN	Engineer
ERF	Early Reinforcing Force
FA	Field Artillery
FASTALS	Force Analysis Simulation of Theater Administrative and Logistic Support
FI	Finance
FORSCOM	Forces Command
IRR	Individual Ready Reserve
JA	Judge Advocate
JCS	Joint Chiefs of Staff
LAD	Latest Arrival Date
LG	Logistics
LID	Light Infantry Division
M-day	Mobilization Day
MD	Medical
MFO	Multinational Force and Observers
MH	Military History
MI	Military Intelligence
MOOTW	Military Operations Other Than War
MOS	Military Occupation Specialty
MP	Military Police
MRC	Major Regional Contingency
MRS	Mobility Requirements Study
Mx	Mechanized
NEA	Northeast Asia
NTC	National Training Center
OD	Ordnance
ODS	Operation Desert Shield/Storm

OOTW	Operations Other Than War
PA	Public Affairs
POD	Port of Debarkation
QM	Quartermaster
RC	Reserve Components
RLD	Ready-to-Load Date
SC	Signal
SPOE	Sea Port of Embarkation
SWA	Southwest Asia
TA	Theater Army
TAA	Total Army Analysis
TC	Transportation
TDA	Table of Distribution and Allowance
TOE	Table of Organization and Equipment
TPFDD	Time Phase Force Deployment Data
TTHS	Trainees, Transients, Holdees and Students
USAR	U.S. Army Reserve
WEAR	Wartime Executive Agency Requirement

Chapter One

INTRODUCTION

The Army force structure that formed the basis for the overwhelming victory in Operation Desert Storm in 1991 was a large, extremely ready, and very capable force by U.S. historical peacetime standards. The Cold War structure of 28 Army divisions had been created to deter or defeat the numerically superior Soviet forces in worldwide conflict. Since the breakup of the Soviet Union, the national military strategy has changed from an almost singular focus on a global confrontation with communist aggression to one that emphasizes a broad range of missions spanning the spectrum from major regional contingencies (MRCs) to operations other than war (OOTW).

In 1991, the Chairman of the Joint Chiefs of Staff proposed the Base Force, premised on a reorientation of the military strategy to regional threats and crisis intervention. Later, Secretary of Defense Aspin's Bottom-Up Review (BUR) continued the planning for movement away from a Cold War force structure and, while retaining the regional strategy orientation, proposed further reductions in the Army force structure. The result is a planned Army force structure that is to go from a 28-division Cold War force to an 18-division force, a decrease of 35 percent. Furthermore, pressure for additional reductions is likely to continue, in view of changing perceptions about the role of the United States in world affairs and the competing demands for limited federal budget resources.

Given these changes, what are the likely requirements for Army forces in the coming years? What is the capability of the Army force structure that is evolving from the Bottom-Up Review to respond to these requirements? What are the implications for the mix of units,

both combat and support, needed in the active and reserve components?

Planning for all but the smallest of combat operations has long presumed reliance on the active component for early-deploying combat forces and ready access to the reserve components for the bulk of all support forces and, should they be needed, for later-deploying combat forces. This concept was largely validated by the experience in the Persian Gulf War. Though the Army had been dependent on the Army reserve components for many years, no reserve units had been called to duty or tested in battle for decades. In 1990 the situation changed radically.

The Gulf War occasioned the first call-up of reserve forces in more than two decades. In all, the Army activated some 1,045 units with 145,500 Selected Reservists and almost 22,000 additional individual reservists. Of the units activated from the Army's reserve components (RC), 708 were deployed to Southwest Asia and 43 to Europe.[1] All of the Army RC units deployed overseas were support type units such as military police, transportation, medical, ordnance, and quartermaster located at echelons above division. The remainder of the units served in the continental United States, including three combat brigades that were being trained for later deployment should they be needed.

For the most part, these units were ready and performed their missions capably. In its report, the Department of Defense said, "Most units of the Reserve Components were ready to be deployed on schedule and the timing and sequence of their deployment was determined by the needs of the theater commanders and similar factors, rather than by postmobilization training requirements" (Department of Defense, 1991).[2] By most all accounts, the reserve

[1]The Army's Reserve Components include the Army National Guard (ARNG) and the U.S. Army Reserve (USAR). The Guard, organized along state lines and responsible to state governors in peacetime, has a predominance of combat units. The USAR, an exclusively federal force, has a predominance of support units.

[2]Even with this unprecedented success, however, many observers concluded that reserve component units would need to be even more ready if the Army was to achieve its missions in the future. See Sortor, Lippiatt, Polich, and Crowley (1994) for a description of the readiness enhancement initiatives tested by the Army in 1992 and for a description of the readiness of the units.

component support units were able to mobilize, deploy when needed, and perform their missions upon arrival in the theater; there was less agreement, however, with respect to the ARNG combat brigades. The training period for the three brigades seemed long to many who had presumed that the Guard brigades had been trained to the point where they could deploy with or shortly after their active counterparts.[3] Still, ODS did prove to be in most respects the most successful activation and deployment of U.S. reserve forces in the 20th century.[4]

Though ODS may have validated the Total Force concept and the plan for employment of both active and reserve forces in MRCs, since the war the Army's warfighting requirements have shifted even more toward force projection for rapidly evolving contingency operations. Plans for future MRCs call for forces to be deployed much more quickly than was the case in ODS. In addition, noncombat missions, such as the Somalia relief effort, counterdrug operations, and disaster relief, are assuming increasing importance, and they frequently involve short-notice deployment.

For operations other than war—such as Somalia and Bosnia—the Army may not be able to call on the reserves for frequent or extended deployments. Nor may the active component be able to support these missions and at the same time maintain a ready MRC capability and meet its other peacetime commitments and constraints. These conflicting demands lead to a key planning question: How should the active and reserve components be structured to meet the Army's evolving requirements?

STUDY OBJECTIVES

This report documents emerging results from a research project that is investigating whether the currently proposed force structures will allow the Army to meet its requirements, particularly for major regional contingencies, as called for in the BUR. It examines the impli-

[3]For a discussion of the mobilization and train-up of the roundout brigades, see Lippiatt, Polich, and Sortor (1992).

[4]See, for example, National Defense Research Institute (1992) for a review of earlier reserve force call-ups.

cations for both combat and support forces with an eye to determining which can come from the reserve components and which must be in the active component. In making that determination, this report considers not only simple force structure but also the likely readiness levels of the reserve component units and their likely availability. It does so without consideration for other peacetime or OOTW commitments. Other ongoing research is examining Army force requirements for OOTW and how these requirements may affect the Army's readiness to engage in MRCs. It will also address whether alternative active and reserve structures would better serve to meet those requirements.

APPROACH

Our approach, in this phase of the research, to determining the implications of the force structure is to compare the structure with the requirements for various major regional contingencies. We examine the force structure implied by the Bottom-Up Review carried out in 1993 at the beginning of the Clinton administration. We compare that structure against three different requirements: a single MRC requiring four to five divisions, an MRC requiring reinforcement up to a total of eight divisions, and two nearly simultaneous contingencies requiring a total of eight to ten divisions.

We use a range of data sources to define the force structure requirements for contingency operations. For most comparisons we use the force requirements defined by the Army's Total Army Analysis (TAA) process, using either the TAA99 or TAA01 databases. We also use the requirements derived using FORSCOM's Zero Base methodology and requirements used in the Mobility Requirements Study as a check on the TAA-derived requirements.[5]

It should be noted that force sizing scenarios, doctrine, and force requirements are always in a state of change. For example, the Army is currently engaged in TAA03 and, we are told, the requirements in

[5]This will be discussed later; the TAA (Total Army Analysis) is the process used by the Army to develop its required force structure, Zero Base is a methodology developed by FORSCOM to define a minimum essential force for contingency operations, and the Mobility Requirements Study was a JCS study that developed force requirements and the transportation needed to support future contingency operations.

TAA03 are somewhat higher in certain areas (field artillery and transportation, for example) than in TAA01. Such increases, depending upon the resulting force structure changes, might change the magnitude but not the direction of the results developed in this analysis. Such changes are not expected to alter the issues or conclusions presented in this report.

We determine the size of both the combat and support structure needed for each MRC to see if the proposed structure can meet the requirement. While the total Army forces are very large, the active component support structure is relatively small. We need, therefore, to determine how much of the total requirement might be met by the reserve components. We make that determination by applying a RAND-developed methodology that uses availability and readiness to deploy as a basis for component assignment. For support forces, we consider those assigned to the Contingency Force Pool (CFP) as well as those outside the CFP in the general war force structure.[6] In assessing the support force structure, we consider the range of skills required as well as the total numbers. In determining the training readiness of reserve component combat units to deploy, we use both Army and RAND assumptions about the length of postmobilization training required.

REPORT ORGANIZATION

Chapter Two describes the Army requirements implied by the BUR military strategy, the missions identified in the BUR to carry out that strategy, and the planned Army force structure. Chapter Three examines two single-contingency scenarios calling for only modest forces and analyzes the ability of the BUR force to respond to these scenarios under varying sets of assumptions about reserve component readiness and availability. In Chapter Four, we address larger scenarios involving additional combat forces, a "nearly simultaneous" contingency scenario, and their effects on the needed mix of active and reserve component units. Chapter Five summarizes the results of the analysis of MRC requirements; it also introduces the issue of the other peacetime missions and requirements the Army

[6]The Contingency Force Pool is a pool of high-priority support units identified to deploy early in the event of a major regional contingency.

must be able to meet and how they may impact the Army's ability to remain ready for major regional contingencies.

Chapter Two

CHANGING NATIONAL STRATEGY, MISSIONS, AND ARMY FORCE STRUCTURE

NATIONAL MILITARY STRATEGY

The Cold War force structure had been created to contain communist aggression and to deter or defeat the numerically superior Soviet forces in worldwide conflict. Since the fall of the Berlin Wall, the U.S. military strategy has been evolving, from global deterrence of Soviet aggression to a regionally oriented defense. Similarly, the forces planned for that strategy have changed. The first phase of this evolution led to the "Base Force," proposed by the Joint Chiefs of Staff in 1992.

The Base Force, premised on the continued decline of the Soviets, rested on four foundations:[1]

- strategic deterrence and defense,
- forward presence,
- crisis response, and
- reconstitution.

As we will describe in more detail later, this evolving strategy led to a proposal that called for the Army force structure to be reduced between 1990 and 1995 from eighteen active divisions to twelve and from ten reserve component divisions to eight. Even as the Base

[1]See Joint Chiefs of Staff (1992) for a more detailed discussion of the strategy and force structure assumptions in the Base Force.

Force was being briefed to the Congress, there were calls for further reductions to free federal budget resources for other purposes.

Representative Les Aspin was one of the more vocal opponents of the Base Force, and he proposed four alternative force structures. The Aspin alternatives for Army force structure included force levels ranging from eight active Army and two reserve divisions to ten active and six reserve divisions (Aspin, 1992). "Option C" received the most attention. It called for nine active and six reserve divisions. Soon after the presidential elections, Representative Les Aspin became the Secretary of Defense and initiated the Bottom-Up Review to develop a national military strategy and define the forces needed to carry it out (DoD, 1993).

The Bottom-Up Review identified four new dangers that would shape future military strategy and force structure needs:

- proliferation of weapons of mass destruction and delivery systems,
- regional dangers,
- danger to democracy, reform, and civil order, and
- danger of a weak economy.

The Bottom-Up Review concluded that conventional forces should be oriented primarily to address the regional dangers and the danger to democracy, reform, and civil order. It sized those forces based on three requirements:

- major regional contingencies,
- peace enforcement and intervention, and
- forward presence.

These three requirements will be used in our analysis of Army force structures. The first phase of the analysis, described in this report, addresses the requirement for MRCs. In a future publication we will address the other two requirements and how meeting them will affect the Army's ability to maintain sufficiently ready forces for the MRCs. Below we briefly examine how the future Army force structure is proposed to change based on the new military strategy.

ARMY FORCE STRUCTURE

The Army force structure is now planned to decrease from twenty-eight divisions (eighteen active and ten reserve) to eighteen divisions (ten active and eight reserve). In terms of military personnel, the Army will go from 1,546,000 (770,000 active and 776,000 reserve) at the end of FY 1989 to 1,070,000 (495,000 active and 575,000 reserve) by the end of FY 1999 (AUSA, 1994).

Table 2.1 shows the major elements of change proposed in Army force structure for the last decade of the century. Note that while the reduction in Army active divisions from eighteen to ten might imply twenty-four fewer maneuver brigades, comparing the 1990 force structure to the BUR force actually shows only nineteen fewer active component brigades. Note also that even though the number of divisions in the reserve components, including the cadre divisions, remains the same between the Base Force proposal and the BUR force, the number of reserve component maneuver brigades increases by twelve. As we will discuss, these changes partly reflect the movement in the Army away from roundout and roundup brigades associated with some active divisions to three-brigade active divisions and the new concept for enhanced brigades in the Army National Guard (ARNG).

Although the composition and stationing of forces in the future is always in some doubt, we believe that a ten-division force would

Table 2.1

Changing Army Force Structure

Force Structure	1990 Force	Base Force	BUR Force
Endstrength			
Active	732,000	535,000	495,000
Reserve	754,000	567,000	575,000
Number of Army divisions			
Active	18	12	10
Reserve	10	6	8
Cadre		2	
Total maneuver brigades			
Active	52	36	33
Reserve	55	30	42

consist of six heavy divisions, two light infantry divisions, one airborne division, and one air assault division. Under recent planning assumptions, three heavy divisions would be forward deployed, with two in Europe and one in Korea. Each of these forward-deployed divisions, however, would have only two of its brigades in the theater; the third brigade of each would be in CONUS. One infantry division (with two brigades) would be in Hawaii, and one infantry brigade would remain in Alaska. All of the other brigades, including the armored cavalry regiments (ACRs), would be stationed in CONUS. Our discussion will be predicated on this composition and stationing scheme, illustrated in Table 2.2.[2]

Figure 2.1 shows the combat force in terms of the number and component for the combat divisions and brigades as well as the peacetime basing (CONUS or forward deployed) and the time period in which the force is expected to be available and deployed if needed to respond to an MRC.[3] The combat forces shown in the Contingency Response Force (CRF) (an airborne division, an air assault division,

Table 2.2

Active Component Brigade Composition and Stationing

Type and Location	Number of Brigades
Airborne (CONUS)	3
Air assault (CONUS)	3
Mechanized or armor	
Overseas (Europe and Korea)	6
CONUS	12
Infantry	
Hawaii and Alaska	3
CONUS	3
Armored cavalry regiments (CONUS)	3
Total	33

[2]Note that these illustrations do not include the ranger regiment or special forces groups that exist in the special operations forces. Included are three brigades each for the ten divisions and three ACRs.

[3]The depiction of the force in Figure 2.1, and similar figures to follow, is adapted from a FORSCOM briefing slide titled "FORSCOM Force Generation Model."

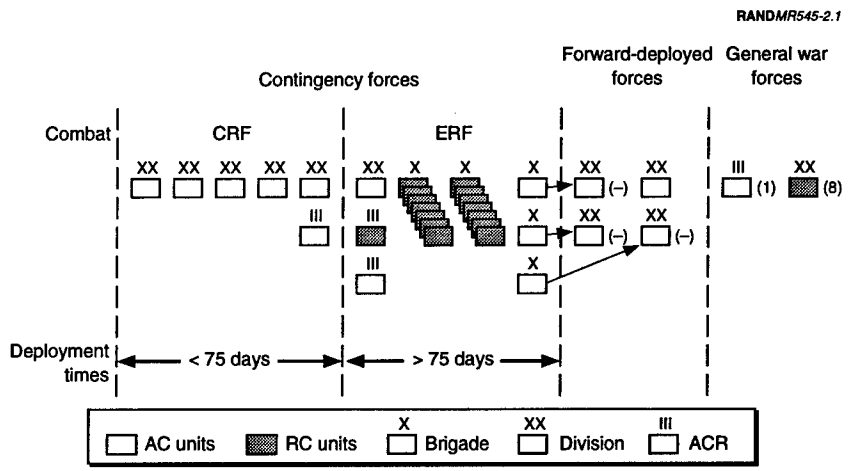

Figure 2.1—BUR Force: Combat Structure

an infantry division, two heavy divisions, and an armored cavalry regiment) are all available to deploy and to arrive in the theater of operations in less than 75 days. Another heavy division, an ACR, and the fifteen enhanced brigades (one is an ACR) are available in the Early Reinforcing Force (ERF) after day 75. In addition to the forces forward deployed, there are additional combat units designated as the general war forces, the bulk of them in the eight National Guard divisions. They are expected to take about a year of preparation and training after mobilization before they would be ready for deployment to a combat theater. Later we will overlay on this same construct the support forces as they are expected to be stationed and deployed with the combat units.

Comparing the Base Force and the BUR force proposals, the endstrength for the active Army would decline by 40,000. The Army endstrength can be divided into three major categories: TOE, TDA, and TTHS. TOE (Table of Organization and Equipment) units are the combat and support units that are available to deploy to a wartime theater and constitute almost two-thirds of the active Army endstrength. TDA (Table of Distribution and Allowances) units are nondeploying units that perform support functions like individual training, higher headquarters command and control and administration,

and research and development.[4] The TDA force accounts for about 25 percent of Army endstrength. TTHS (Trainees, Transients, Holdees, and Students) accounts for those individual soldiers, about 12 percent of the active Army, who are in training or otherwise not available for assignment to TOE or TDA units.

Table 2.3 depicts the Army endstrength we have allocated to these categories of the force structure and further breaks down the TOE force into the major elements of the combat and support forces.

The TOE, TDA, and TTHS allocations for both the Base Force and the BUR force were taken from an Army briefing presented to Congress in October 1993.[5] The allocation for the elements of the TOE force was derived using data from an Army database that reflected 1991 planning estimates for the proposed 1995 Base Force. We adjusted the Base Force allocations to reflect the combat force changes discussed above (the elimination of two divisions) to arrive at the

Table 2.3

Changing Active Force Structure Endstrength

Force Structure	Proposed Base Force	Proposed BUR Force
TOE units	338,000	311,300
Combat units	201,000	184,900
EAD and EAC support units	137,000	126,400
Forward presence	64,000	47,600
CONUS	73,000	78,800
CONUS support units in CFP		77,600
TDA organizations	135,000	123,900
TTHS account	62,000	59,800
Total	535,000	495,000

[4]The Army TDA force is manned primarily by civilian personnel; however, many functions have military personnel assigned. The TDA includes the CONUS-based units that would be required to mobilize, train, deploy, and sustain the deployed combat and support forces. These requirements are beyond the scope of this analysis.

[5]Statement prepared for testimony by Major General John Ellerson and Brigadier General William Bolt before the Subcommittee on Military Forces and Personnel, Armed Services Committee, House of Representatives, October 27, 1993.

allocations for the BUR force case. Data on units in the Contingency Force Pool (CFP) were obtained from FORSCOM.

The active Army force structure reflects two major changes in the integration and resourcing of active and reserve component units. As mentioned earlier, one change is the movement in the combat structure away from the reserve roundout concept for active army divisions to a concept of reserve enhanced brigades, or as they are often called, "E" brigades.[6] At the time of ODS, seven active Army divisions did not have the full doctrinal complement of three active brigades; instead, each division relied on one brigade from the reserve components to round it out and provide its third brigade in wartime. In addition, some active divisions had an associated roundout battalion, the so-called tenth battalion. Under the BUR force, all the active divisions would have three active brigades. The Army would rely on the fifteen enhanced brigades from the ARNG for any early augmentation of active component combat forces.

The second change in integration and resourcing strategy was the implementation of a "pool" concept for support units that would be needed for deployment early in a major contingency operation. CFP units, both active and reserve, constitute the pool of units from which support units for a contingency would be drawn. These units, particularly the reserve component units, receive priority for resources and command attention in order to assure a high level of readiness.

The pool concept replaced the Capstone program, which had aligned units according to an operations plan allocation and wartime chain of command. For most units Capstone meant a unique alignment to one wartime theater and one wartime chain of command. The result for the force at large was that all units had equal priority for re-

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[6]A doctrinal combat division in the U.S. Army has three maneuver brigades. Divisions rounded out by reserve brigades have two active brigades and one reserve component brigade. Each roundout brigade has a headquarters company, three maneuver battalions (tank or infantry), a field artillery battalion, and a forward support battalion (the organization with the medical, maintenance, and supply capacity that directly supports the brigade). Roundout brigades also include a company from the division's combat engineer battalion, a troop from the division's cavalry squadron, and individuals from other divisional headquarters and support organizations.

sources, since each had equal likelihood of being called upon, depending on the particular contingency or theater of operations. Under the CFP concept, only units in the CFP need be kept at the highest level of readiness, since they would deploy first to any contingency; the remaining units would be called later if needed. Thus, the other units receive lower priority for resources. They can be at a lower readiness level because they would deploy later, regardless of the particular contingency or theater. By lowering the number of units that needed to be ready to deploy quickly, the CFP reduced the total amount of resources required for these types of units. Note that virtually all of the active CS/CSS structure in CONUS is identified for the CFP, so these active units enjoy equal priority.

The support structure concept is shown in Figure 2.2 in terms of component, stationing, and planned availability for deployment.[7] CFP packages 1 to 4 are intended to deploy and be in the theater within 75 days to support a five-division CRF, while packages 5 through 7 are to deploy after day 75 to augment the CRF and to support the Early Reinforcing Forces (ERF). Though not to scale, the shaded area roughly represents the proportion of reserve components in each segment of the support force. The active component is to provide a larger portion of the earliest-deploying support units (those deploying in the first 75 days), while the reserve components are to supply a growing proportion over time. Most of the CFP packages 5 through 7 are composed of reserve component units, with the overall CFP (packages 1 through 7) roughly split between 40 percent active component and 60 percent reserve component.

We should note the importance of reserve component support units to the Army's early-deploying capability, as shown in Figure 2.2 by the force generation model depiction. Though the ARNG's combat elements, particularly the enhanced brigades, most often garner public attention, it is the support units in the reserve components that play a critical role very early in any contingency. For example,

[7]Note that Figure 2.2 includes only the portion of the Army support structure that would deploy to the combat theater. It does not include the critical CONUS-based support structure, often termed the sustaining base, required to mobilize, train, deploy, and supply the deployed force.

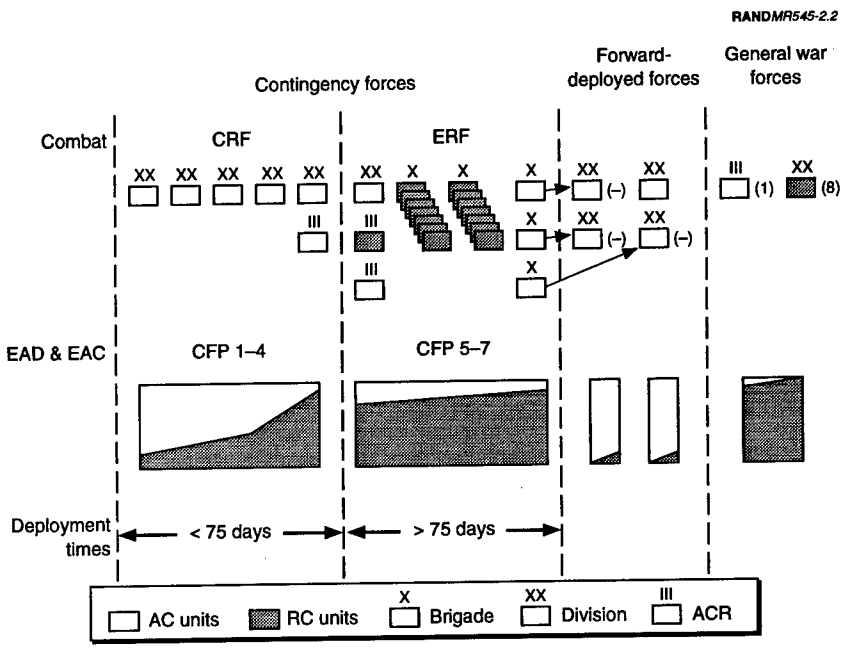

Figure 2.2—BUR Force: Combat and Support Structure

Army plans indicate that 7,000 personnel from reserve component support units would deploy in 30 days in support of a three-division contingency force. More than 108,000 have been identified to deploy in support of a five-division force to be in place within 75 days (Peay, D'Araujo, and Baratz, 1994).

As shown in Table 2.1, under the Base Force proposal the ARNG force structure would have declined from ten divisions to eight and would have lost up to 25 total brigades. Endstrength would have gone from 436,000 in 1990 to 338,000 by 1995. As a result of the BUR and other force structure decisions, the DoD current plan is for the ARNG to retain eight full divisions (none would be cadre divisions, as had been proposed under the Base Force) and a total of 42 combat maneuver brigades. While the wartime required strength for this force structure would total 405,000, budget limitations mean that the ARNG

would only be authorized to man up to 367,000 of the structure in peacetime. Table 2.4 shows how the endstrength would be allocated to the major elements of the ARNG force structure (Army National Guard, undated). Note that unlike the active component, neither the ARNG nor, as we will show in Table 2.5, the USAR has a TTHS account. Members of reserve units who are attending individual training or are temporarily unavailable to the unit due to illness or injury remain assigned to their unit and count against unit endstrength. This can be a problem if a unit is mobilized and a number of its members are not available for deployment.

Under the Base Force, the USAR force structure would also have been reduced. From 1990 to 1995 the total USAR endstrength was planned to decline from 319,000 to 229,000. As a result of the BUR and other force structure decisions, the USAR endstrength is now planned to decline to 208,000 by the end of the century. The difference between 229,000 and 208,000 is due in part to the transfer of some force structure from the USAR to the National Guard. The transfer included the consolidation of combat maneuver units and special forces groups into the ARNG and movement of aviation from the USAR to the ARNG. The USAR retains its psychological operations and civil affairs structure in the special operations force (SOF).

Table 2.4

ARNG Force Structure Endstrength

Element	BUR Force Endstrength
TOE units	335,900
Combat units	174,600
Enhanced or roundout/roundup brigades	64,500
Division and other combat structure	110,100
Special operations force	3,200
Contingency force pool (packages 1–7)	60,200
Other CS/CSS units	97,900
TDA organizations	31,100
TTHS account	0
Total	367,000

Table 2.5 shows the allocation of USAR endstrength across the major elements of the force structure.

WHAT CHANGED AND WHAT DID NOT?

In terms of strategy, the Base Force and the BUR force are not very different. Each emphasized regional threats and the need to size forces for major regional contingencies. Each posited the need to be able to fight and win two nearly simultaneous MRCs. The BUR added greater emphasis to military operations other than war and to the dangers of a weak economy.

In terms of force structure, the Army active force structure differs between the two proposals by two division headquarters and three maneuver brigades. The reserve component structure is larger by twelve brigades under the BUR as compared to the Base Force. Of the twelve, eight are high-priority brigades, with the concept of enhanced brigades (fifteen in the BUR force) replacing the roundout/roundup brigade concept (seven under the Base Force). It should be noted that, to the extent cost was a motivating factor for the reduction in active component combat forces, it is difficult to see how the reduction in three active component brigades results in a saving to the Army after it pays for the additional eight high-priority ARNG

Table 2.5

USAR Force Structure Endstrength

Element	BUR Force Endstrength
TOE units	152,000
Combat units	0
Special operations force	7,500
Contingency force pool (packages 1–7)	53,500
Other CS/CSS	91,000
TDA organizations	56,000
TTHS account	0
Total	208,000

brigades.[8] In total, endstrength in the active would be 40,000 less under the BUR proposal and 8,000 more for the reserves.

In the next chapter we will begin to examine the forces required for MRCs and the mix of active and reserve component units needed in the force structure to meet these requirements. We will present the methodology used to determine the appropriate mix of active and reserve units to meet the requirements, and we illustrate the methodology with two MRCs each requiring four to five divisions. As was pointed out above, reserve component support units are critical to the early success of any MRC: both those that can be met only with active component combat units and those requiring augmentation by reserve component combat units. We will examine in Chapter Four cases requiring combat reinforcements and the considerations in determining the circumstances under which active or reserve component combat units might be appropriate.

[8]In terms of total endstrength, the reduction of the active component combat structure equates to about 16,000 endstrength, while the increase in twelve reserve component brigades is on the order of 45,000 endstrength.

Chapter Three

ARMY FORCES FOR MAJOR REGIONAL CONTINGENCIES

The Bottom-Up Review defined four new dangers to be addressed in developing a national military strategy and force structure: proliferation of weapons of mass destruction and delivery systems; regional dangers; danger to democracy, reform, and civil order; and danger of a weak economy. In terms of missions for the conventional forces, the BUR identified three missions to include major regional contingencies, peace enforcement and intervention, and forward presence. Two of these—regional contingencies and forward presence—were also identified in the Base Force analysis. Peace enforcement and intervention, while longstanding missions performed by military forces, have not been identified in the past as missions to be considered in structuring or sizing forces.

Here we report only on results of analysis regarding major regional contingencies. The MRCs are likely to be the most stressful in terms of total force requirements. Also, the other missions may, as the BUR suggests, be curtailed if necessary in the event of a major regional contingency. While these other missions may not have a great effect on total force size, they may have a large effect on the peacetime training readiness of the force and may limit the flexibility for early employment of the force. These aspects are subjects of ongoing analysis and will be reported in later publications.

This chapter begins the examination of the force structure implications by examining two small regional contingencies (each requiring no more than four to five divisions) to determine the Army force requirements and comparing these requirements to the capabilities planned for the future force structure. It also assesses the ability of

the units in the CFP to provide the range of skills necessary to meet the requirements. Using a RAND-developed methodology, we determine which portion of the structure could come from the reserve components, and which must come from active forces. Finally, we make some observations about the readiness of the reserve units assigned to the CFP based on our recent experience with Army programs to improve RC readiness (Sortor et al., 1994).

DETERMINING ARMY REQUIREMENTS FOR A MAJOR REGIONAL CONTINGENCY

The Army, in its Army Strategic Mobility Plan (ASMP), has called for a capability to deploy to any theater in the world a force of two heavy divisions and one light division in 30 days and to complete deployment of a full five-division contingency corps, including supporting elements, in 75 days (Department of the Army, 1993, p. 26). The JCS mobility requirements study (MRS) called for procurement of transportation capability to support deployment of one light division and one heavy brigade within two weeks and an additional two heavy divisions in about a month. The approved program would provide this capability by the turn of the century (CJCS, 1993). Finally, the BUR called for four to five Army divisions to successfully engage in a single major regional contingency. The following scenario captures the major elements of the above statements of requirement.[1]

Combat Forces

Figure 3.1 depicts a scenario for deployment of Army forces constructed from the requirements implied by the ASMP, MRS transportation capability, and the BUR requirement for Army forces to successfully engage in a single MRC. It posits a 4-2/3 division force deploying to Southwest Asia within 60 days. The airborne division and its equipment are airlifted from CONUS and reach the theater no later than 14 days after deployment is initiated. Personnel and limited equipment for a heavy brigade are airlifted to the theater where

[1]Throughout this report we only address requirements for the deployed force. We do not examine the requirements for CONUS-based forces that would be needed to mobilize, train, or deploy this force.

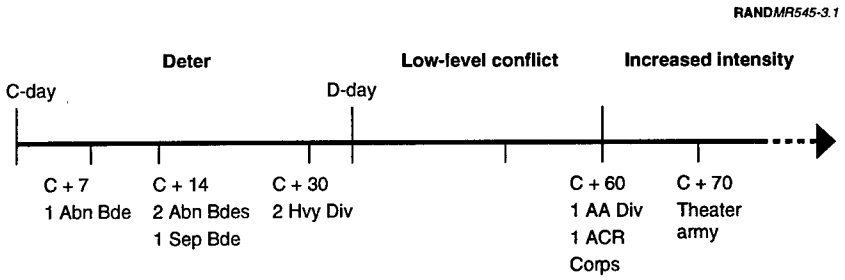

Figure 3.1—Southwest Asia Four-Division Force Scenario

they join the bulk of the equipment that is prepositioned in the theater or on prepositioning ships that can get to the theater and be unloaded in the necessary time. The equipment for two heavy divisions is shipped from CONUS beginning very soon after C-day and is joined by personnel airlifted from CONUS to the theater by about 30 days after C-day. This particular example shows the air assault division and an armored cavalry regiment getting to the theater by day 60 and the bulk of the support forces for the corps and theater army (TA) reaching the theater as early as C-day plus 70.

As Figure 3.2 shows, deploying the forces described above at the times shown would result in about 72,000 personnel deploying to the theater to fill the required combat structure. Based on the scenario assumptions, all of the combat force would be in the theater within about 60 days after deployment had begun. The proposed BUR active Army combat force structure can meet the combat requirement, assuming readiness and transportation capability remain on course. While this is faster than the force deployment in ODS (a comparable force closed a little more than 20 days later), the steps already taken to improve the deployability of Army forces and the programmed increase in transportation capability are planned to make such a timeline possible by the turn of the century.

Combat forces are only a piece, and often only a small piece, of the force needed to support contingency operations. In ODS, for example, out of a deployed force of a little over 300,000 only about 125,000 were in combat units, while almost 180,000 were in support units. This counts only Army military personnel and does not account for

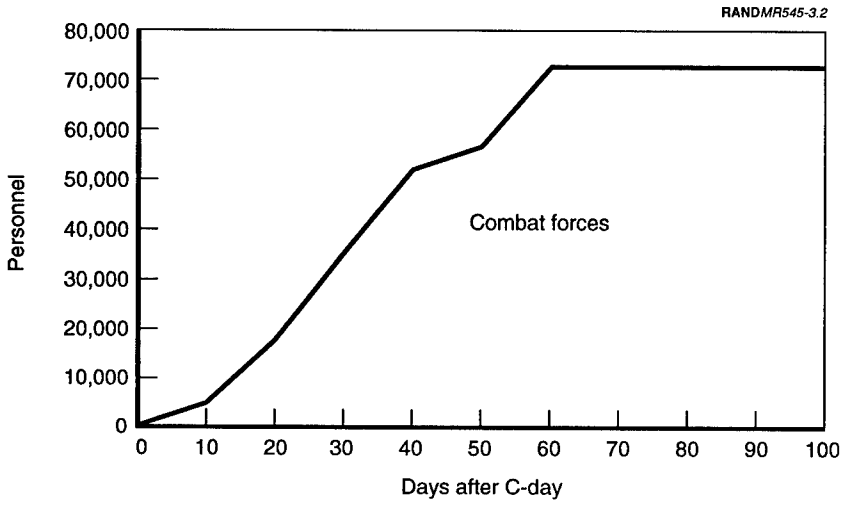

Figure 3.2—Combat Force Requirements

Army civilians and contractors or for host nation support, all of which played a significant role in providing support capabilities in ODS. Saudi Arabia had a rich infrastructure. In addition, a conscious decision was made to provide for only a very austere deployed support structure. Future scenarios may call for a larger support force more in line with what current doctrine would indicate is required.[2]

Support Forces

The support forces we are interested in are those units outside the divisions and separate brigades that are required at the corps level (echelons above division, or EAD) and at theater army level (echelons above corps, or EAC) to support the divisions and separate brigades. These units (in functions such as transportation, medical, signal, and

[2]It is noted that there are efforts underway within the Army to reexamine how contingency operations should be supported in the future and how the forces should be organized. Such efforts could change radically how units are organized and what support structure might be required in the theater. The realization of these efforts is not, however, likely to be effected operationally before the turn of the century.

maintenance) have historically and doctrinally constituted two-thirds of the total Army forces (in terms of personnel) required in most theaters of operation. In this section, we will describe how we determine the kinds, numbers, and timing of requirements for support units at echelons above division for contingency operations in which the requirements and deployment timing for combat units are as described in the scenario above.

Figure 3.3 shows the overall methodology for developing the active/reserve mix of required forces. The timing of the combat force deployment and the theater and scenario specifics are provided as inputs to a model called FASTALS (Force Analysis Simulation of Theater Administrative and Logistic Support) (U.S. Army Concepts Analysis Agency, 1988). The model then derives time-phased requirements for the kinds and numbers of support units needed at echelons above division and echelons above corps. After specifying three inputs—the transportation time from CONUS to the theater by air and by sea, the desired mode for various transportation requirements (by air or by sea), and when the different types of units can be ready to load—we used our empirically based "Transition-to-War" methodology to assign unit requirements to either the active component or reserve components. The sole criterion is whether a reserve component unit can be ready to deploy in time. This results in a "minimum" active component support force structure. This is not to say there should not be other considerations in determining whether a given unit or unit type should be in either the active com-

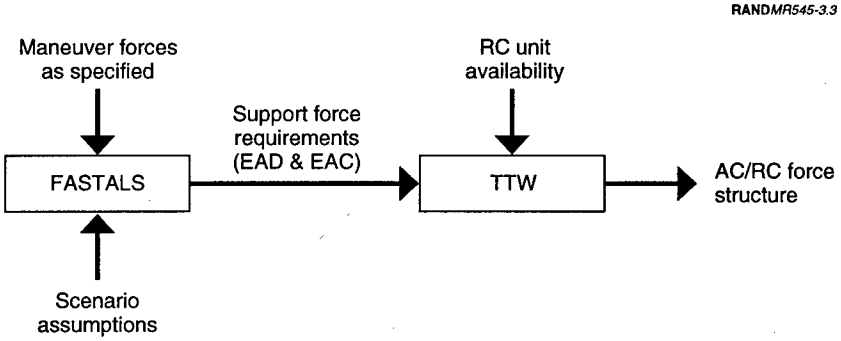

Figure 3.3—Determining the Active/Reserve Mix for Deploying Forces

ponent or the reserve components for a given force structure. There are training considerations, peacetime missions and workload, etc. For this analysis, however, we have set those considerations aside and considered only whether a given wartime requirement "could" be met by reserve component units.

The Army process normally includes combat simulations to derive the warfighting results for input to the model and a lengthy review and iterative refinement of the results by staff functional experts to develop results that the Army can confidently use for developing and defending a specific force structure and budget proposal. This lengthy process normally takes over a year to complete. We are using the model in a somewhat different way and attempting to use existing inputs, developed by the Concepts Analysis Agency (CAA), to the maximum extent possible and making only limited changes to the inputs to reflect alternative scenarios or combat force requirements. Our results approximate what would be developed using the longer and more detailed process, and based on our analysis to date and comparisons to other data, we believe our methodology is sound for examining force mix policy issues.

The example discussed here was derived using a baseline set of FASTALS databases obtained from CAA and the Army subsequent to their use in TAA99 (Total Army Analysis 1999). Our scenario varied somewhat from those used in the TAA99 analysis, so to account for those differences we have changed the input data files. This included changing the required arrival dates for various combat units in the theater of operations to reflect the arrival time specified for the particular scenario being considered. Similarly, we changed the arrival times for certain major support elements (corps and theater headquarters, for example) whose arrival times in the theater are specified manually. When FASTALS is used by the Army, theater consumption levels for various types of material (water, petroleum, ammunition, medical, etc.) are obtained from combat simulation results and provided as an input to the model. Since combat simulation results were not available for these force arrival times and combat levels, we calculated the theater consumption levels in FASTALS using the default planning factors built into the model data obtained from CAA.

Figure 3.4 depicts a doctrinal support force structure developed using FASTALS and the above-described combat deployment schedule.

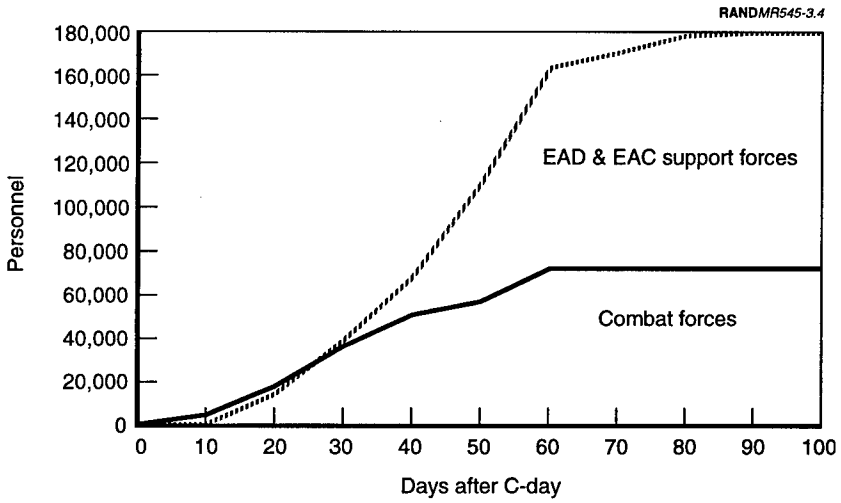

Figure 3.4—Total Deployed Force Requirements

It results in a support force totaling about 180,000, compared to the 73,000-person combat force. This ratio is consistent with the rough rule of thumb that indicates a ratio of support to combat of about 2.5 to 1 for a fully mature theater.[3]

Notice that the first support units begin arriving with or slightly ahead of the combat units and continue to arrive for some time after the last of the combat units have arrived in the theater. The ratio of combat to support personnel varies during the deployment (it is roughly 1 to 1 at C-day plus 25 and grows to about 1.4 to 2.3 between day 40 and 60), building to about 2.5 when the theater is fully developed.

[3]In the MRS, the Joint Staff used a rule that the ratio for the weight of support unit equipment compared to the weight for combat units could not drop below 1.5 to 1. A weight ratio of between 1.5 to 1 and 2.5 to 1 for support forces compared to combat forces was deemed acceptable risk. These ratios illustrate that there is some range below the doctrinal level that may be acceptable given constrained resources. For our purposes we will take the doctrinal force as required but look later at alternatives that relax this assumption. Changes in doctrine and support concepts could also lead to increases in the ratio. For example, ongoing Army analyses for the TAA03 process have considered changes that result in ratios on the order of 2.6 to 1.

IS THE CFP THE CORRECT SIZE AND COMPOSITION?

As mentioned, one of the initiatives the Army took both to improve its capability to deploy rapidly and to minimize the readiness costs was to form what is called the Contingency Force Pool. Active and reserve component support units from this pool would deploy to whatever contingency might occur, and they are intended to provide the minimum essential support to the deployed contingency corps. The currently configured CFP has support units totaling about 193,500 personnel. In overall size, then, the total CFP would be adequate for the example shown in Figure 3.4, where the total support force requirement is about 180,000. However, as we showed earlier in Figure 2.2, the Army plans that CFP packages 1 through 4 should support an MRC requiring up to five divisions. CFP packages 1 through 4 contain only about 117,700 personnel and thus would not provide sufficient forces for a doctrinal structure. Are the units the correct ones in terms of the skills provided versus the requirement? As might be expected from the above, and as shown in Figure 3.5, CFP packages 1 through 4 would result in shortages in most branches.

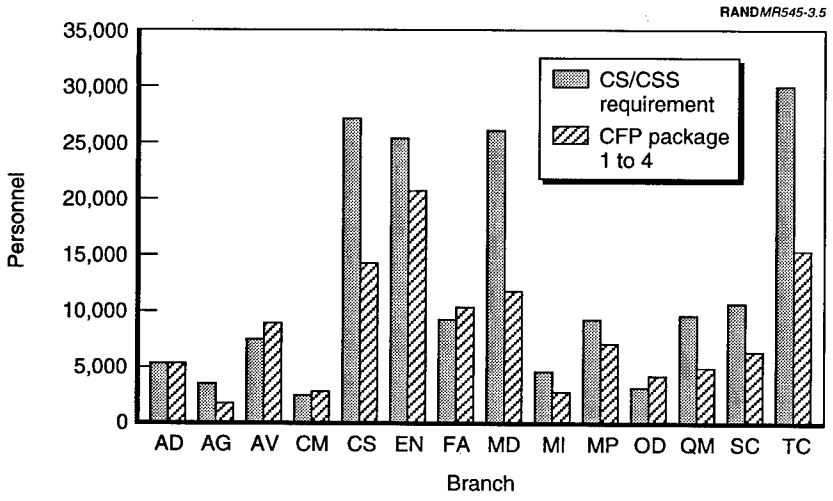

Figure 3.5—CFP Packages 1 to 4 Are Short in Most Branches

Figure 3.6 shows that in most cases there appear to be adequate resources in the total CFP to meet most of the skill requirements for our chosen scenario. Six branches (adjutant general, composite services, medical, military intelligence, quartermaster, and transportation), however, have shortfalls totaling about 13,500 personnel. The CFP capability in the transportation branch alone would be short by over 6,000 personnel.

Why do the differences, particularly in these branches, exist? There are at least two explanations. First, our requirements may simply be overstated. It has been suggested that the TAA process and the implementation of FASTALS lead to an inflated requirement. While we agree that this is a partial explanation, we believe the major reason for the differences to be that the CFP is sized based on providing only minimum essential support to the Army contingency corps. TAA and the FASTALS database we have used for this analysis both size a doctrinal support structure for Army units and also include support for the other services such as for transportation of fuel, ammunition, and rations for the Air Force and Marine Corps. These requirements are termed wartime executive agency requirements (WEAR), and the

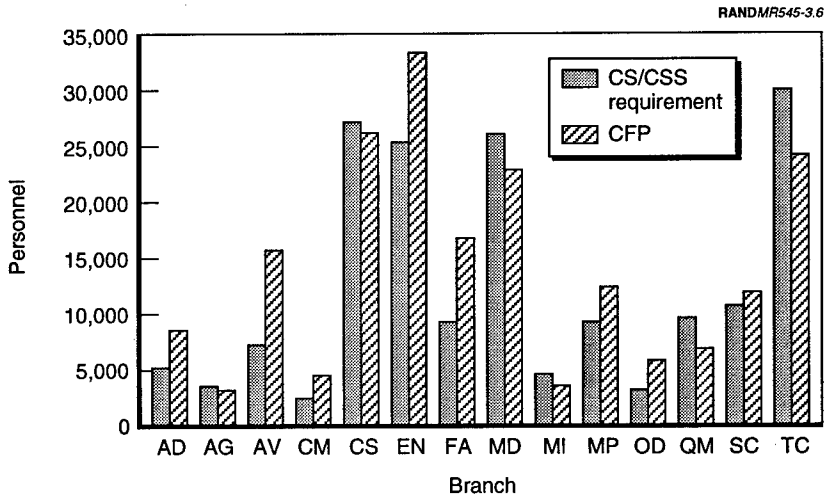

Figure 3.6—Comparison of Requirements and CFP by Branch

Army is the wartime executive agent for providing this type of support to the other services (Betac, 1994). We will next examine both the question of the accuracy of our statement of the requirement and the effect of the WEAR requirement.

Alternative Statements of Requirements for MRCs

Concern has been expressed in the past that the TAA process may overestimate the requirements for support forces. This issue surfaced in the Mobility Requirements Study (MRS). It was also one of the principal motivations for FORSCOM's development of its Zero Base methodology for estimating a "minimum essential support" requirement. This minimum essential support force was not intended to provide all of the doctrinal support expected in a mature theater, but instead only that portion absolutely essential to support combat operations during a contingency's initial phases. This Zero Base methodology can be used to develop minimum essential requirements for both the five-division contingency response force (CRF) and for an additional three-division follow-on emergency response force (ERF). To gain a sense of the dimension of what FASTALS calls for versus other statements of requirement, we compare the results from our analysis to the requirements submitted by the Army for the MRS and to results using the Zero Base methodology.

The MRS database we obtained from the Army shows a deployed combat force of 73,000 and a support force of 157,000. FORSCOM's Zero Base methodology calls for a support force of 136,300 for an equivalent combat force. These estimates are in comparison to the support requirement in Figure 3.4 of 179,900 for a similar combat force. Figure 3.7 depicts these estimates.

From these comparisons we might conclude that our FASTALS-estimated requirements are severely overstated. When we look at individual branches, however, we find that for most of them the estimates are very close. If we look at the differences by branch between our estimates and the MRS data, for example, we find that the differences in two branches—medical and transportation—account for virtually all of the difference of almost 23,000. The MRS and FASTALS estimates for transportation units differ by almost 14,000. Thus the capability shortfalls shown in Figure 3.6 may not be as severe as indicated, and the CFP is capable of providing at least the

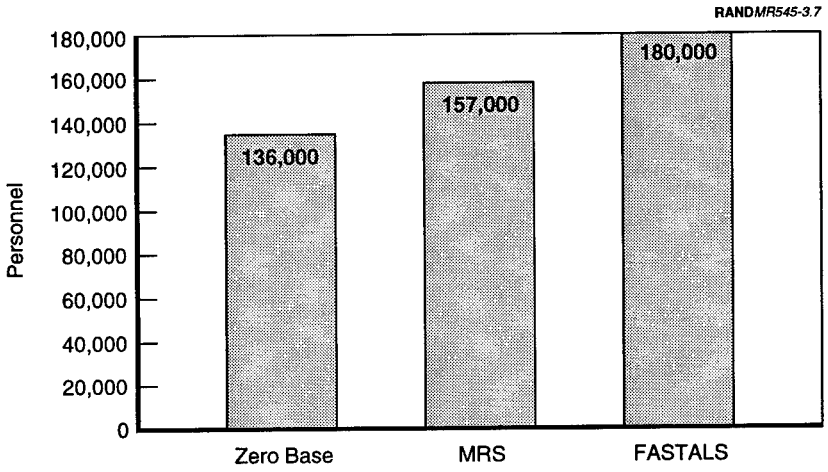

Figure 3.7—Comparing Support Force Requirements

minimum essential support to Army forces. We believe that in the case of transportation and quartermaster units, the CFP may not have sufficient units to provide the support the other services may be expecting. In addition, as discussed above, the Army is expecting to support a four- to five-division force with units from CFP packages 1 to 4, with units from packages 5 through 7 available to support combat units from the ERF. This would imply, at least for some types of units, that there would not be any left to support the ERF if adequate forces were deployed to fully support the CRF. At least a portion of this shortfall is due to omitting the Army requirements for support to the other services when sizing the CFP. We look next at the issue of the Army's WEAR commitments.

Army Wartime Executive Agency Requirements

Table 3.1 depicts three estimates of the Army WEAR for scenarios in either Southwest Asia or Northeast Asia. The first estimate for each is from TAA99 and the second is from estimates provided by the respective theater CINCs in response to a CAA request in 1991. These data are taken from a CAA study of Army logistics support to other services (U.S. Army Concepts Analysis Agency, 1992). The third set is taken from TAA01 data. Note that while the requirement reflected in

Table 3.1

Army Wartime Executive Agency Requirements

Contingency	TAA99	CINC	TAA01
Southwest Asia	20,200	57,100	45,000
Northeast Asia	5,800	14,600	9,000

TAA01 is larger than that in TAA99, it is still not as large as the CINCs' estimates provided for 1991. This may simply reflect a change in forces or in the activity levels assumed for the forces from the other services.

Table 3.2 compares the requirements for each of the branches. As might be expected, since the largest Army WEAR is for in-theater ground transportation of petroleum, ammunition, and rations, the transportation branch and related branches account for most of the requirement. In the case of the CINCs' estimates for 1991, the transportation branch requirement is over one-half of the total. This is consistent with the shortage in transportation identified earlier when we compared the requirements for the Southwest Asia contingency and the capability of the CFP units.

From the above comparisons, we conclude that the requirements from the alternative methods, if predicated on like requirements and including the Army's WEAR, are very similar and that the alternative results would not lead to significantly different force structures or active/reserve mix decisions. For example, adjusting the Zero Base result shown above of 136,300 to include a WEAR of even 20,200 would lead to a total requirement of 156,500 compared to our estimate of 179,900. A difference of 13 percent between estimates for a full doctrinal support base versus a minimum essential support base is, we believe, entirely reasonable. It is also consistent with the MRS, which recognized that the transportation needed to deploy a full doctrinal structure in the early phase of a contingency might not be affordable and that a somewhat smaller support force would constitute an acceptable risk.

Given the active Army force structure shown in Table 2.3 and the comparison of the CFP capability above, it is obvious the Army will

Table 3.2

Army Wartime Executive Agency Requirements for Southwest Asia by Branch

Branch	TAA99	CINC
Engineers	3,500	4,600
Medical	1,600	3,500
Quartermaster	2,500	6,500
Adjutant General	400	700
Finance	100	300
Composite Services	3,200	7,000
Transportation	8,900	34,400
Total	20,200	57,100

need support units from the reserve components if it is to deploy the force required. Even a requirement for an austere support force of 156,500 personnel, indicated by the adjusted Zero Base force, cannot be met with the active units in the CFP (total of about 77,600 personnel) or even by the entire active component support force of 126,000, including the forward-presence forces in Europe and Korea (which may or may not be available for deployment to other theaters). A question is, how much of the support force requirement might realistically be met by reserve component units?

DETERMINING THE MIX OF ACTIVE AND RESERVE UNITS

As discussed above, the methodology developed for analyzing the transition to war (TTW) for both active and reserve units can be used to determine the appropriate mix of units. The TTW methodology models the process units go through in transition from peace to war and determines the time for each step in the process. Using a single criterion—ability to meet the time schedule for deployment—this methodology determines whether a deploying support unit can be in one of the reserve components or whether it must be in the active component. If a reserve component unit can meet the deployment schedule, it is assigned to the reserve components.

To determine the mix of active/reserve support units to meet scenario requirements, we must not only know when the units need to

arrive in the theater, we must also determine how fast the different types of units could be ready to deploy if they were called from the reserve components. To get a first estimate of the latter, we used data from the ODS mobilization to estimate how long it takes like units to prepare for deployment. Using data on the reserve component units that deployed during ODS, we developed estimating equations to predict reserve support unit availability for units deploying by sea and those deploying totally by air (Lippiatt et al., 1992). Examples of the predicted number of days before selected units would be ready to load are shown in Table 3.3.[4]

In all cases, the model predicts the number of days between mobilization or call-up and the time the unit is prepared to load its equipment at its mobilization station for movement to the port of embarkation (ready-to-load date, or RLD) for subsequent movement to the theater of operations. For reserve component support units going entirely by air, the time between call-up or mobilization and

Table 3.3

Predicted Reserve Component Support Unit Availability Based on ODS Experience

Branch	Equipment Weight (tons)	Days to Ready-to-Load Date (RLD)	
		APOE	SPOE
Engineers	9	15	15
Ordnance	41	17	15
Composite services	219	26	19
Medical	258	23	15
Field artillery	1,540	n/a	26
Transportation	1,936	n/a	15

[4]Note that different units from a particular branch may require much longer or shorter times than others. In the case of the engineer unit shown, a Topo map unit, it only takes 15 days to prepare to deploy, while an engineer battalion having over 1,900 tons of equipment would require longer to prepare and train. Even in the case of the engineer battalion, however, much of the additional training and time to prepare to deploy could occur while the unit equipment was in transit to the theater by sea.

the RLD at the mobilization station varies from 10 to 31 days. For unit types whose equipment goes by sea and the personnel by air, the predicted number of days between call-up and the RLD at the mobilization station ranges from 9 to 28 days. Note that in the latter case the units have a number of days to continue training and to complete personnel processing between the time the equipment is shipped and the date the unit has to be ready to depart by air to meet its equipment at the sea port of debarkation. As a result, some units can be ready to load for sea transport earlier than they could be ready to load for air transport. The longer sea transit times, however, cause the unit to arrive in the theater later than it would if deployed by air.

A simple illustration shows how such times play a key role in developing an empirically based active/reserve mix for Army force structures. Consider medium truck companies. The above methodology estimates that medium truck units in the reserve components need 15 days, on average, before their equipment can be ready to move to a port and load onto ships. Since it takes about 22 days, on average, for sealift to load, transit, and unload cargo in Southwest Asia, this means that reserve units would need 37 days before they could be available in that theater. According to our requirements calculation described above, the combat forces should be accompanied by 19 medium truck companies, to arrive in the theater according to the following schedule:

- 2 units between C-day and C+18
- 2 additional units by C+28
- 2 additional units by C+38
- 6 additional units by day 58 and the remainder by day 108.

If we assume that sealift is promptly available to move them, then reserve units could meet delivery requirements scheduled 38 or more days after M-day, the day when reserve units are mobilized.[5] If

[5]M-day is usually associated with a declaration of either partial or total mobilization. S-day is associated with the presidential call-up authority to activate up to 200,000 selected reservists for up to 90 days. In ODS, S-day was declared about 20 days after deployments began, with partial mobilization, or M-day, coming much later. We use M-day here to mean either presidential call-up or mobilization.

M-day and C-day (the day deployments begin) coincided, then reserve units could number 15, or about 80 percent of this contingency's requirements for such units. The earlier requirements for 4 medium truck companies of this type would have to be met using active-duty units.[6] Similar results hold for other types of support units required in the theater.

These estimating relationships can also be used to develop active/reserve force structures for all units for the scenario. Two cases illustrate the effect of the estimated availability of reserve component support units on the force structure required to support contingency operations and the active/reserve mix in that force. In the first case, we show the mix for the case where call-up or mobilization is initiated at the same time as deployments begin (M-day = C-day). In the second case, we will assume that the authority to mobilize the reserves comes 20 days after deployments begin. The latter was the case in ODS, for example, where the initial authority to call up reserve units came 20 days after deployments had began (S-day = C-day + 20).

Figure 3.8 shows the mix of active and reserve support units, measured in terms of personnel in the units, for the example scenario with M-day equal to C-day. If no reserve component units could be ready in time to meet any of the requirements, all would have to come from the active component, and the active component would need to contain over 180,000 personnel in support units ready to deploy to a contingency theater. In the above case, however, if future reserve component support units can be ready to deploy on the same timeline after call-up as they did in ODS, then they can meet all but about 37,000 of the support requirement. As discussed above, these results are sensitive to when call-up authority is provided. Figure 3.9 illustrates the effect of delaying call-up authority by 20 days.

[6]We have illustrated the case here where the reserve component units ship their own equipment to the theater after they have completed whatever training is necessary that requires their unit equipment. If equipment were available for the unit in the theater, prepositioned stocks for example, reserve component personnel in many functions could be ready and be airlifted to the theater to join equipment by C+18.

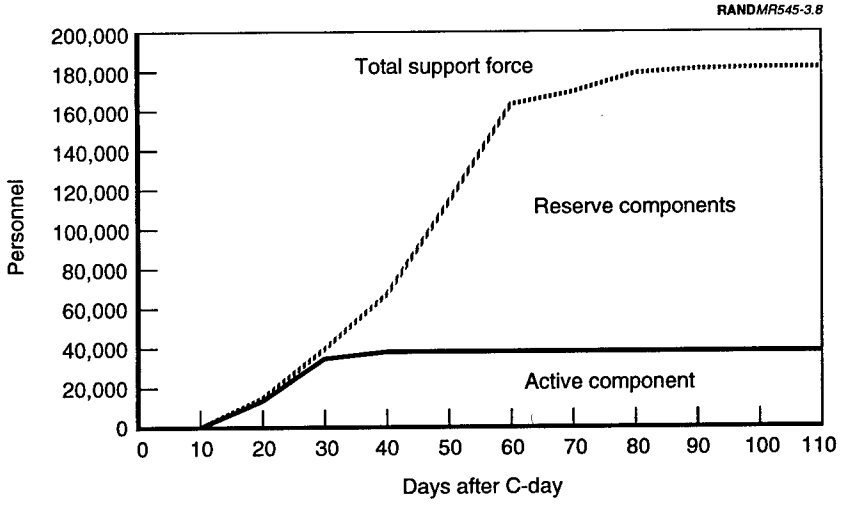

Figure 3.8—Mix of Active and Reserve Support Forces if M = C

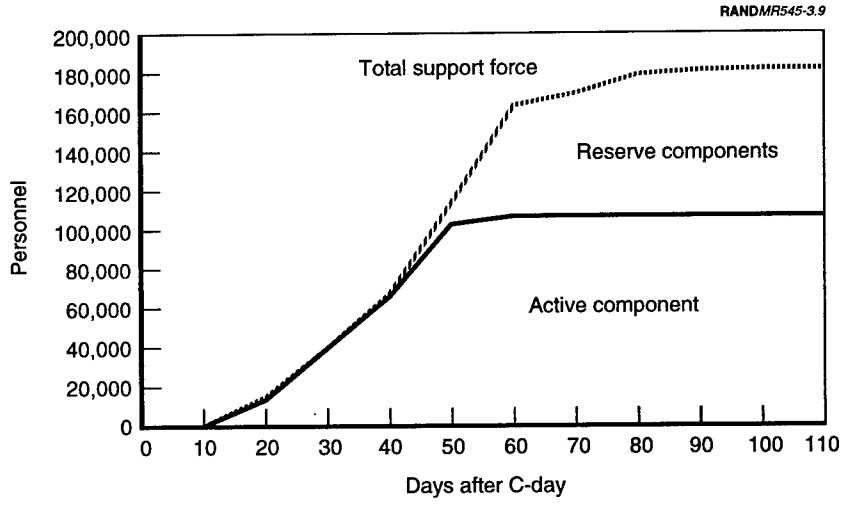

Figure 3.9—Mix of Active and Reserve Support Forces if M = C + 20

In the MRC example shown in Figure 3.9, a 20-day delay implies that an additional 70,000 personnel from the active component must deploy to meet support requirements until reserve component units are called and can be ready to deploy. Thus, planning for only a short delay of 20 days—recall that the call-up date in ODS was 20 days after deployment began—would require an active component support force of almost 110,000, versus a force of less than 40,000 if planning is based on immediate call-up authority. Also, these data would indicate that if forces are planned based on immediate call-up but call-up is delayed for 20 days, then the combat forces deployed would be at substantial risk without adequate support.

Note that this same shortfall would result if call-up were to occur as planned but reserve component readiness problems delayed unit deployments by an average of 20 days. Thus it is clear that the readiness of reserve component support units is a critical element in the Army's ability to deploy quickly to an MRC. The current CFP and expected active force structure would not be able to meet any increased requirement resulting from either a delay in the decision to mobilize support units or inadequate readiness in reserve component units in the CFP.

Although the above discussion has centered only on a Southwest Asia scenario, most force sizing also considers a contingency in Korea. We next briefly consider a Northeast Asia scenario.

Figure 3.10 depicts a combat force deployment scenario for Northeast Asia illustrating a deployed contingency corps of a little over four divisions.

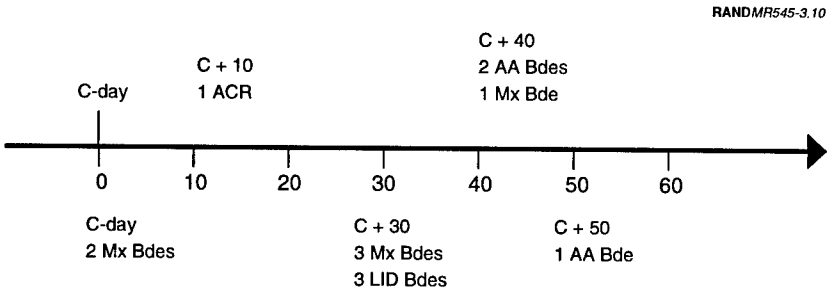

Figure 3.10—Scenario for Northeast Asia

Figure 3.11 depicts the combat and support forces required for the Northeast Asia scenario. Note that the deployment is faster than in the earlier Southwest Asia case, reflecting the reinforcement of an existing theater with capability to receive and integrate forces more quickly than a theater without significant U.S. presence. This has implications for the required mix of active and reserve component support forces to adequately meet this more rapid buildup of forces.

Figure 3.12 shows, for Northeast Asia and where M-day equals C-day, that the active component would need to provide about 79,000 of the 147,000 support forces if the support units are to meet the deployment schedule. This would imply that the active component would have to deploy about 67,000 from CONUS to augment the roughly 12,000 in the theater, as compared to the active component deployment requirement of 37,000 for the Southwest Asia case shown earlier. This is still within the capability of the active units in the CFP (total of 78,000), and in this case, the total requirement is well within the total CFP capability of 194,000. Again, however, there would be small shortages, totaling about 6,000, in medical, military intelligence, and quartermaster units. Most of the shortage, 4,000, is in medical units. In the case of Northeast Asia, unlike Southwest Asia, there would be ample transportation available.

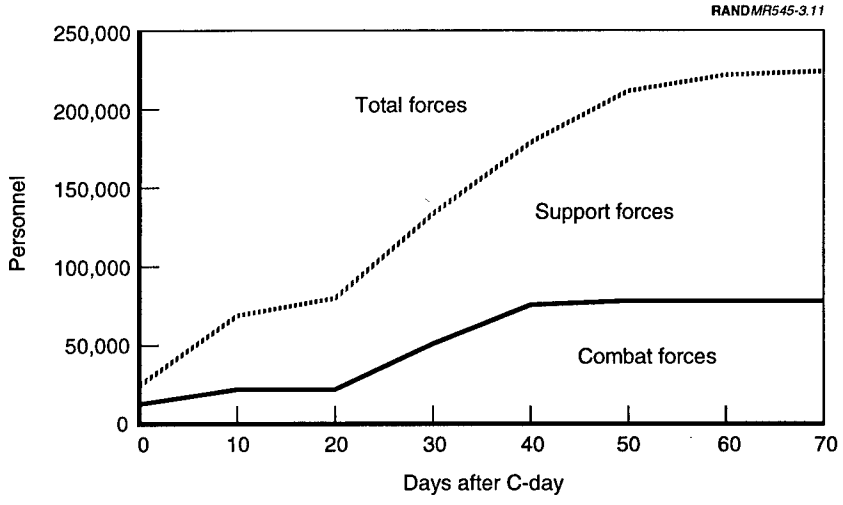

Figure 3.11—Force Requirements for Northeast Asia

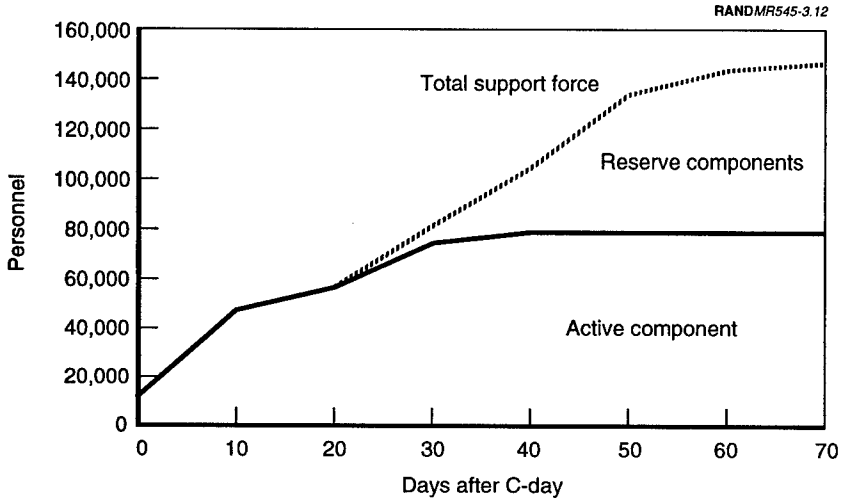

Figure 3.12—Active/Reserve Mix for Northeast Asia Support Forces (M = C)

READINESS OF RESERVE COMPONENT CFP UNITS

One of the reasons for going to the CFP concept was to identify certain units as high-priority units and to direct resources to those units in order to ensure their readiness. The Army has instituted a number of programs to improve the readiness of reserve component units. The Army's Bold Shift program, the ARNG's Project Standard Bearer, and the USAR's Project Prime were instituted, in large part, to improve the readiness of the early-deploying units and the CFP in particular (Sortor et al., 1994). The estimates used in our analysis for how long it would take for reserve component units to be ready to deploy are based on ODS experience. If reserve component units are more ready now than they were in 1990, our estimates would understate how much of the force could be in the reserves.

Preliminary analysis of readiness measures from the annual training reports for a sample of units in both 1992 and 1993 does not indicate that the readiness levels of most units have improved to the point of invalidating our estimates. The peacetime training readiness goal for support units under Bold Shift is for units to be trained at the com-

pany level. This would imply that the units would be capable of deploying in a very few days after being called. For a set of 146 support units in 1993, 32 percent reported having reached this goal.[7] Further, the reported data from the units indicated that the 146 units on average would need about 20 days of training after being called to active service before they would be prepared to deploy. These data are not inconsistent with our model estimates using ODS data. The sample size of units and the nature of the sample, however, do not permit comparisons by branch. In general, while Bold Shift readiness and training goals have not been met by most of the support units, the units would be able to meet the deployment timelines in our example if they were called to active service immediately.

As we have pointed out elsewhere, the biggest hurdle to improved readiness of high-priority reserve component units appears to be personnel readiness and specifically the ability of the units to man their requirements with skill-qualified personnel (Sortor et al., 1994). For example, for the high-priority units for which we have data from annual training in 1992 or 1993, only about 75 percent of the personnel in the units were reported to be fully skill qualified for their duty position. These data indicate that the units are still having problems in staffing and in individual skill qualification similar to those seen in the units called for ODS.

Adequacy of Forces for a Major Regional Contingency

The above analysis indicates that the active and reserve component force structure proposed under the BUR is adequate to meet the requirements of a single MRC requiring no more than four to five Army divisions if reserve component support units are made available at or very soon after the initial deployment of combat forces. The active and reserve component support forces in the CFP are adequate in total numbers to provide the doctrinal EAD and EAC support structure. However, six branches (adjutant general, composite services, medi-

[7]These reports include evaluations of reserve component unit performance at Annual Training under FORSCOM's Training Assessment Model. Such assessments are supposed to be carried out jointly by unit commanders and external active component evaluators. See Sortor et al. (1994) for a description of the Training Assessment Model and its uses.

cal, military intelligence, quartermaster, and transportation) would not have sufficient structure to meet all requirements. We believe this shortfall results from the CFP's being sized to support only Army forces, even though the Army has executive agency responsibility for providing selected support to other U.S. forces. These executive agency requirements could be as large as 20,000 to 60,000, depending on the size of the deployment and the availability of contract or host nation support.

The BUR also calls for the Army to be capable of deploying additional forces to reinforce a single contingency and of meeting the requirements for two nearly simultaneous contingencies. We address these additional requirements in the next chapter.

Chapter Four

REQUIREMENTS FOR REINFORCED OR NEARLY SIMULTANEOUS MRCs

While the BUR concluded that four to five Army divisions would be adequate in most cases to win a single major regional contingency, it recognized that in other situations additional forces might be required. In addition, the BUR called for the capability to win two nearly simultaneous major regional contingencies. In this chapter we look at alternative requirements for a single contingency requiring reinforcement and also at the implications of prosecuting two MRCs nearly simultaneously.

SINGLE MRCs REQUIRING REINFORCEMENT FORCES

In TAA01 the Army developed requirements for scenarios requiring forces beyond the 4-2/3–division force in our earlier illustration. For Southwest Asia, a scenario included the deployment of a 9-division equivalent (27-brigade) force. It is used here to illustrate the timing of force deployments should a larger force be required. Recall that ODS resulted in the deployment of only a slightly smaller 7-2/3–division equivalent (23-brigade) force.

Figure 4.1 depicts a Southwest Asia scenario that differs only slightly from our earlier example in the first 50 or 60 days but that requires additional combat forces to deploy into the theater beginning about day 100 and continuing to day 140. These additional forces include 12 additional maneuver brigades or about 4 additional division equivalents.

TAA01 was done in the context of the Base Force, which included roundout and roundup national guard brigades in seven active com-

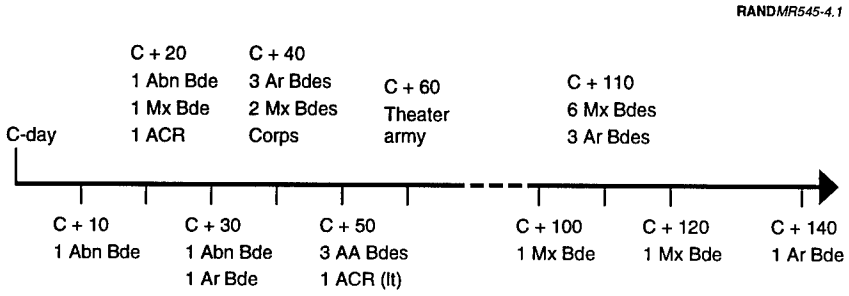

Figure 4.1—Reinforced Southwest Asia Scenario

ponent divisions. It deployed three roundout or roundup brigades. For our analysis we will initially count all brigades as generic in the sense that we will not identify them by component at the outset. We will let the analysis determine which must be in the active component and which might come from the reserve components in some future force structure based on deployment requirements and training readiness considerations.

Combat Forces

Figure 4.2 shows the cumulative number of maneuver brigades deployed in the scenario shown above in Figure 4.1. It depicts the brigades as generic in terms of the type of brigade (armor, mechanized infantry, etc.), whether divisional or nondivisional, and the component (active or reserve).

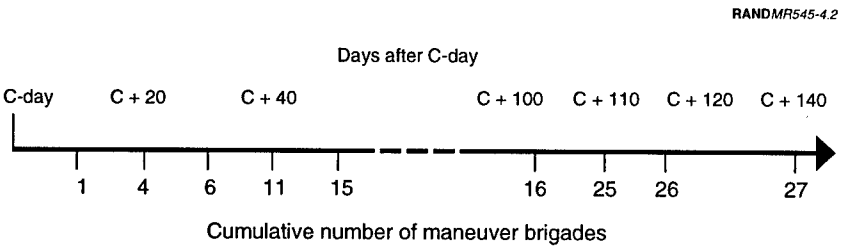

Figure 4.2—Combat Maneuver Brigades for a Reinforced Southwest Asia MRC

The question is, how many of the brigades shown in Figure 4.2 could come from the reserve components? Predicated on a Base Force with roundout brigades, the Army in TAA01 planned for at least three of the brigades to come from the ARNG. This is, at least in part, based on the Army goal of having the high-priority ARNG brigades trained and ready to deploy within 90 days after they are called.[1] Is this goal likely to be attained? Past RAND analysis that examined the likely train-up time for high-priority reserve component combat brigades concluded that 90 days was very optimistic (Lippiatt, Polich, and Sortor, 1992). Below we briefly summarize the results.

The RAND analysis developed estimates about how long it might take reserve component combat forces to prepare for deployment to a wartime theater. In analyzing the potential train-up time, RAND drew on four main sources of information:

- Information on the train-up process of the three National Guard roundout brigades that were activated for service in ODS.
- Analyses and projections of reserve component training time estimates made by the Department of Army Inspector General.
- Training plans followed by active component units during peacetime to sustain readiness.
- An extensive series of interviews and observations with both active and reserve component personnel during the 1992 summer annual training cycle for National Guard brigades.

Drawing on all of these sources, we constructed a minimum set of activities that a reserve component combat unit would likely be expected to complete following mobilization. Twelve specific activities were defined and grouped into four general categories. These are shown in Table 4.1.

[1]We note that there is not universal agreement on what "ready to deploy in 90 days" means with regard to the 15 enhanced brigades. Some suggest it means the first of the brigades ready in 90 days, with the rest to follow. Others suggest it means some subset of the brigades (3 or 4 is often mentioned) are to be ready in 90 days. Clearly the post-mobilization resource requirements (training ranges, observer/controllers, qualified trainers, etc.) for these cases, not to mention the peacetime readiness implications, are quite different and would require substantially different resource commitments in peacetime to ensure their availability.

Table 4.1

Necessary Postmobilization Activities

Mobilization Activities	
1.	Mobilize, move from home station to mobilization station
2.	Move from mobilization station to collective training site
3.	Preparation for overseas movement and individual training
Crew/Platoon Training	
4.	Maintenance, gunnery preparation, COFT, crew gunnery skills test
5.	Gunnery Tables IV–VIII
6.	Gunnery Tables XI–XII
7.	Squad drills, platoon lanes, Situational Training Exercises
Training While Task Organized	
8.	Company Team lanes and Situational Training Exercises
9.	Company/battalion combined arms live fire exercises
10.	Battalion task force operations
11.	Brigade and battalion task force operations
Training Recovery and Preparation to Move	
12.	Maintenance, recovery, and preparation for loading

We made a number of assumptions in the analysis about the status of the units and their peacetime training and maintenance activities. For example, since the Army plans to fully resource (at Authorized Level of Organization 1) the enhanced brigades, we have assumed the brigades would have at least 90 percent of their personnel and equipment at mobilization. Additional activities and time could be required to bring a unit up to full strength, train personnel for MOS qualification, or fill out its equipment set if the brigades were not at the planned level of readiness when mobilized.

Once we identified the activities required, the next step was to develop estimates of the time it would take to complete them. Analysis of the data described above was used to determine how long Army units have typically taken to train the identified tasks in the past, deriving average times when we had information from multiple units. These figures provided a basis for our estimates.

Three scenarios were used for postmobilization training. They are labeled optimistic, intermediate, and pessimistic. Each scenario reflects a varying level of peacetime training readiness for the unit. Each case also assumes an increasingly detrimental effect from skill atrophy and personnel turbulence. Table 4.2 shows estimates for the three cases.

Using the RAND estimate and, alternatively, the Army goal of 90 days, we can designate which of the brigades in the reinforced Southwest Asia scenario could come from the reserve components and which would need to come from the active component in order to meet the required date in the theater. We will assume that the brigades are called to active duty at C-day and that it will take about 22 days to load, transit, and unload in the theater of operations. These results are compared to the TAA01 force structure in the next figure.

Figure 4.3 shows the resulting mix of deployed active and reserve component combat force structure using the RAND intermediate estimate as compared to the TAA01 force structure. Note that, as discussed earlier, TAA01 included three National Guard roundout and roundup brigades and, in addition, two separate brigades that would most likely come from the reserve component.

Using the RAND estimate of 104 days for postmobilization preparation and training and 22 days for transportation implies that only one of the 27 required brigades could come from the reserve, as the earliest arrival would be at day 126. Twenty-six of the brigades would come from the active component, as indicated on Figure 4.3 by the

Table 4.2

Postmobilization Time Estimates for Three Cases

Case	Days Required
Optimistic	79
Intermediate	104
Pessimistic	128

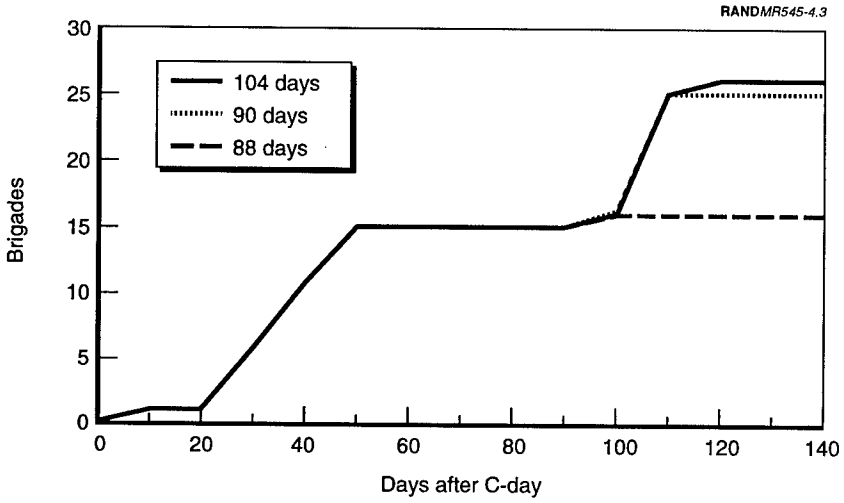

Figure 4.3—Cumulative Active Combat Brigades Required, Depending on Days Needed to Train Reserve Component Brigades

line labeled "104 days." The implication of 26 combat brigades being drawn from the active component is discussed later. Note that in this case, the RAND pessimistic train-up time estimate of 128 days would only result in one more brigade coming from the active component; or alternatively, the last brigade, if drawn from the reserve component, would arrive about ten days late. As discussed later, this might not be a significant delay.

On the other hand, if the Army goal of 90 days train-up time is attained, then those brigades needed at or after day 112 could come from the reserves. In this case two reserve brigades would be used and 25 brigades would come from the active component, indicated by the line labeled "90 days." A very different picture emerges, however, if the reserve brigades could make only a slight improvement, reducing preparation time from 90 to 88 days. The result is indicated by the line labeled "88 days" in Figure 4.3. With just this two-day improvement (which could be achieved through changes in either training readiness or transportation), the last 11 brigades arriving at or after day 110 could all come from the reserves; only 16 brigades would be needed from the active component. A two-day improve-

ment on this baseline is not unreasonable. The real question is, can the enhanced brigades in the BUR force structure be trained and ready to deploy in about 90 days after being called to federal service?

Improving Reserve Component Readiness

The RAND combat train-up analysis was done at a time when the Army was implementing a number of programs to improve the training readiness of high-priority reserve component units. We have assisted the Army in assessing some of those initiatives, including the Bold Shift program, and have formed impressions based on the experience to date (Sortor et al., 1994). That experience sheds light on what can be expected from the enhanced brigades.

Based on what we observed in the 1992 and 1993 training years, we think it will be difficult for units to reach the premobilization goals in peacetime required for deployment at 90 days. The challenge of getting a sufficient percentage of full crews to annual training and still meet all other individual and unit training requirements seems daunting. This is borne out by the results of the Army's Bold Shift program for enhancing the readiness of high-priority reserve component units, initiated in 1992. To enhance the training status and collective skills of reserve component units, the Army adopted significant changes in the way those units train. The first was to focus training on lower-echelon levels. Training in combat units was to be concentrated on crew gunnery and platoon maneuver.

While successful in many dimensions, Bold Shift did not bring the pilot units to their premobilization training and readiness goals (proficiency in crew gunnery and platoon maneuver for the combat units) in 1992. For example, less than 30 percent of the authorized number of crews qualified on Table VIII. With limited time available, most brigades had to choose among focusing on gunnery, maneuver, or sending individuals to school for MOS (Military Occupation Specialty) qualification and other individual training. There was simply not enough time in their schedules to practice all of the tasks they are expected to master.

One of the toughest challenges is ensuring participation in annual training by a large number of individuals and by all the members of each crew. In 1992, only 60 to 70 percent of members attended AT

with their unit; many of the remainder were attending prescribed individual training courses. The need for such courses is in turn driven by low rates of duty MOS qualification and by required professional education for NCOs who have been (or may be) promoted to a higher-grade position. For example, in 1992 the brigades in the pilot program were manned at 88 percent, but only 75 percent of the assigned personnel were qualified for the duty position to which they were assigned.

In 1993, there was only limited improvement. Again, none of the maneuver units attained their premobilization goals for gunnery and maneuver, though seven of eight armor battalions attempting Table VIII qualification in 1993 qualified an average of 92 percent of the crews attending AT. In terms of authorized crews, however, the armor battalions qualified 58 percent and the Bradley battalions qualified 47 percent. Again, overall the brigades only had 70 percent of their assigned personnel at AT with the unit. Duty MOS qualification had improved slightly, with 80 percent of the assigned personnel qualified in their assigned duty specialty.

Given that experience, we believe it will be very difficult for the combat units to reach and maintain the current premobilization goals and to attain the 90-day Army goal for postmobilization training.[2] We believe the training assumptions that led to our estimate of 104 to 128 days are probably more realistic, because they allow additional time to bring all crews and platoons to the readiness levels needed for higher-echelon training. These estimates should be reevaluated, however, in light of firm plans for how the enhanced brigades are going to be trained during peacetime and mobilization and after identification of the resources needed to execute the plan.[3]

[2]Ongoing research at RAND has developed an alternative postmobilization training and resource strategy (taking greater advantage of parallel training opportunities and training resources) that would result in the first of the brigades becoming available for deployment in the vicinity of 100 days. This should be regarded as somewhat optimistic, however, because it assumes that the peacetime readiness level of each brigade would approximately equal the readiness of the most successful brigades that we have observed in recent years. The number of brigades that could be ready in that time depends upon the resources (training ranges, personnel, support activities) available to support postmobilization training.

[3]Do the enhanced brigades *need* to be ready in 90 days? If the first four or five divisions, all active component, are adequate to stabilize the situation, then perhaps

Reserve component combat brigades could be available in the theater two weeks sooner if preparation could begin before call-up, if they could use nonunit equipment for training, or if the number of tasks they are required to learn is reduced. For example, in many cases it might be reasonable to expect some period of heightened tension or warning prior to a decision to undertake military action. During this time it might not be reasonable to mobilize the brigades but possible to begin preparations so that many of the mobilization activities could be completed prior to actual call or mobilization. If an annual training period were available, for example, this could trim as much as 15 days from the postmobilization time. Under the BUR strategy, there will be three brigade sets of equipment prepositioned overseas, with at least one of the sets on ships. Presumably, an active brigade will join up with this equipment for contingency operations and thus leave its equipment in CONUS. If this equipment could be prepared and shipped and then used for a reserve component brigade, another 30 to 35 days could be saved in getting the brigade to the theater and in operation. Neither of these would require any change in the peacetime training readiness or postmobilization training plans.

Others have suggested deploying the units at some lower level of integration, e.g., deploy the units as companies or battalions, utilizing active component leadership to provide the higher levels of expertise and task force command and control. Our analysis does not indicate that this would save much in terms of the length of time needed to get the units into the theater. This would appear only to eliminate the time for battalion- and brigade-level training and the 19 days allocated for these activities out of the total 128.[4]

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the additional forces needed to provide a more decisive force for a counteroffensive could come in at a later time of our choosing. In ODS, for example, there was a lag from about day 70 to day 150 before the forces for the counteroffensive arrived in the theater. A similar timeline in this case would simplify the peacetime readiness and postmobilization train-up challenge facing the enhanced brigades. Even if 90 days is attainable, it is almost certain to be more costly in terms of peacetime training and maintaining a postmobilization training infrastructure than if the goal were 130 days, for example. It is a question of how much it is worth to try to ensure that the brigades will be ready earlier rather than accepting a somewhat longer postmobilization period.

[4]This is not to say that a lower level of integration may not offer other benefits. For example, it would remove some of the training burden from reserve component unit leaders and the need to train these leaders in the more complex battlefield integration and synchronization skills needed at the higher echelon.

We conclude, therefore, that it would be prudent to assume that a small number of reserve component combat brigades might be available to support a major contingency deployment. But even if they were not available in time, the Army would have sufficient combat forces to deploy for the case of a single reinforced contingency as described above.

Support Forces

As in the case shown in Chapter Three, the combat forces required for the larger scenario are only a fraction of the total Army force that must be deployed to the theater. The EAD and EAC support elements must support not only the deployed Army force but also, in most cases, the other U.S. forces, and in some cases, allied forces as well. This section will examine both the Army support force requirements for its own forces and the likely requirements for carrying out its executive agency role.

Figure 4.4 depicts both the combat force requirement implied by the scenario and the total requirement to include the support forces.[5] Again, the ratio of support to combat is about 2 to 1 at the conclusion of the deployment shown, with about 300,000 in support forces being called for. Compared to the earlier example, deployments in comparable time periods (first 20 to 70 days) are about the same magnitude and speed with respect to the combat forces but are more rapid with respect to the support forces.

Table 4.3 compares the support force requirement for various time periods from our earlier Southwest Asia example to those in the reinforced case.

It appears that in TAA01, the deployment of corps and theater support capability was faster than might be implied by the assumptions used in our example or in the MRS-recommended transportation capability. For example, this scenario appears to have virtually a full corps level capability in the theater by day 40, whereas our earlier example assumed full capability was not required before day 50. Even

[5]The requirements are taken from the Army database developed for TAA01 using the FASTALS methodology described in Chapter Three.

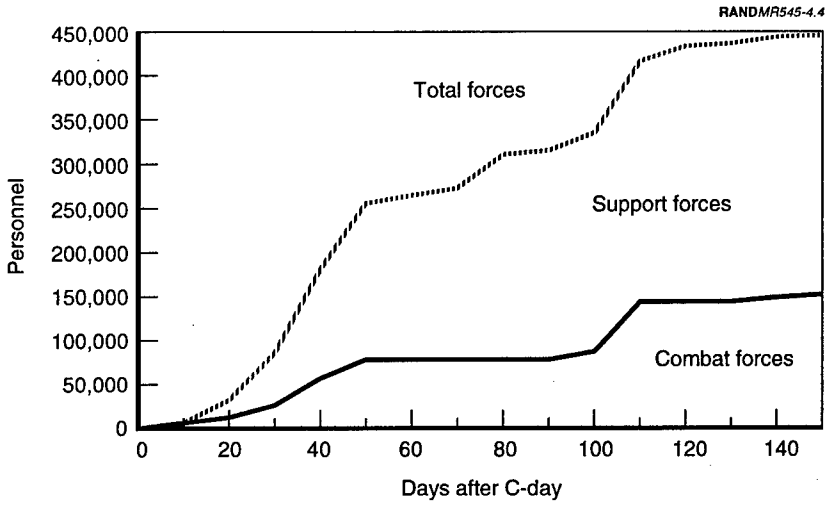

Figure 4.4—Total Force Requirement for the Reinforced Southwest Asia Scenario

small changes during the period between day 20 and day 50 can have large implications for the mix of active and reserve forces required.[6] The first 20 days or so can be met only by active support forces, and even slipping a few days will not change the required mix appreciably. However, many reserve component units that can meet a day 50 requirement may not be able to meet requirements before day 40. We will examine in a moment the effect of the faster earlier deployment on the required mix of forces.

Table 4.3

Comparing Support Force Requirements

Period	Earlier SWA Example	Reinforced SWA
C-day + 30	40,000	55,000
C-day + 40	70,000	120,000
C-day + 50	110,000	175,000
C-day + 70	170,000	190,000

[6]It also has large implications for the surge transportation capability that is required to move the additional forces during the initial period of deployment.

Applying the same methodology used in Chapter Three, we can compute the mix of active and reserve forces that could meet the accelerated requirement. This is shown in Figure 4.5.

The data shown in Figure 4.5 indicate that, if the reserve component units are called to federal service at C-day, they can meet all but about 59,000 of the 300,000 requirement. Thus, the active requirement would be about 22,000 larger (59,000 compared to 37,000 personnel) than it was in our earlier example with its somewhat slower deployment requirement for support forces. If the reserve component units are not called until day 20, as was the case in ODS, then the active component will need to provide over 100,000 additional forces or suffer shortfalls in providing adequate support to the early-deployed combat force. Even if the units are called immediately, there are not sufficient forces in the CFP as it is currently configured to meet the total requirement.

Adequacy of the CFP

Figure 4.6 compares the total support requirement and the active and reserve portions of that requirement with the CFP. The CFP has

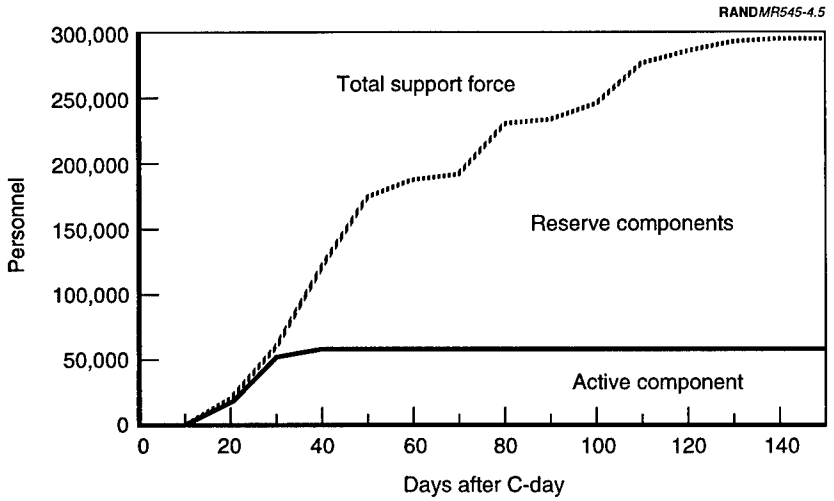

Figure 4.5—Active/Reserve Mix for Support Forces

sufficient active component forces, if the reserves are called immediately, but there are only 193,500 total from all components. This implies a shortfall of about 100,000 in meeting the requirement. Furthermore, although the total in active units in the CFP is adequate for the case where M = C, there is a shortage in transportation units and quartermaster units.

As Figure 4.7 shows, if mobilization is declared immediately (M = C), there is adequate capability in the active component units in the CFP to meet the requirements we identified as active component for each of the branches, with the exception of the quartermaster and transportation branches. The requirement indicates a need for active component quartermaster capability of about 4,500 personnel versus the 3,800 in the CFP. In the case of transportation, there are only about 7,300 in the active transportation units in the CFP, compared to a requirement of 29,000. If mobilization is delayed, these shortages grow, and most of the other branches also have shortages. Only the adjutant general (AG), field artillery (FA), military police (MP), and ordnance (OD) have sufficient active units in the CFP to meet their requirements if mobilization is delayed (M = C + 20).

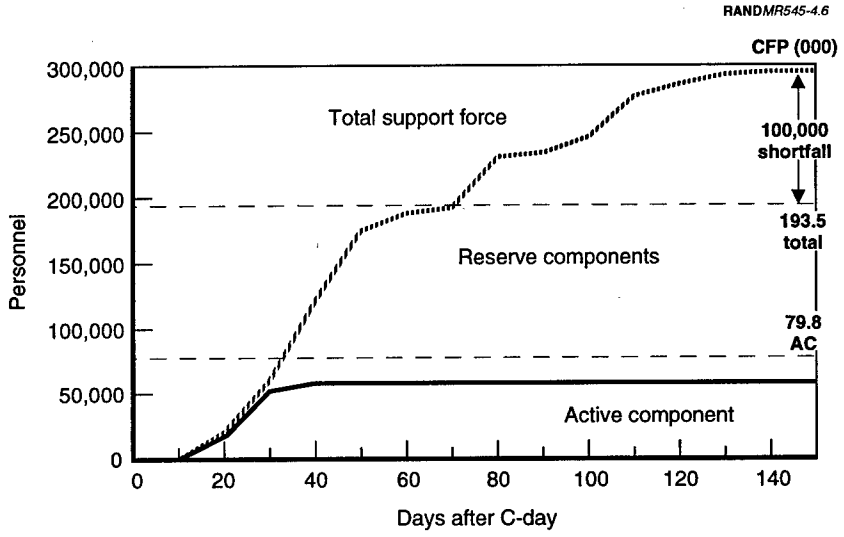

Figure 4.6—Is the CFP Adequate for a Reinforced Scenario?

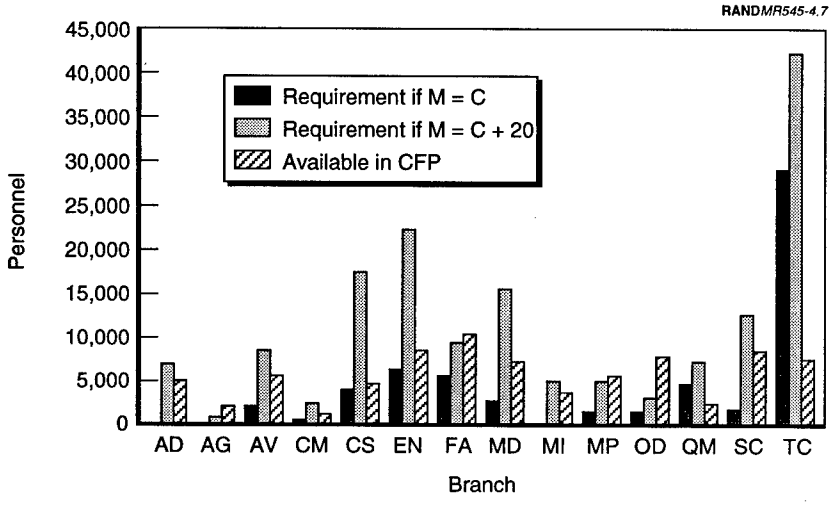

Figure 4.7—Active Component Requirements Versus Active Component CFP Capability

Although there would be enough active units to meet the early requirements for most branches if mobilization is declared immediately, there would not be sufficient units in the CFP to meet the later scenario requirements. This implies the Army would need to go outside the CFP to the general war force units for support units to meet the 100,000 shortfall shown above in Figure 4.6. Recall from Chapter Two that while almost all of the available active component support units are in the CFP, there are additional support forces in the reserve components designated for the general war forces that would need to be mobilized to meet this requirement.

The reserve components contain sufficient forces to meet the total numerical requirement, but they may not have enough in the correct units and, since these units receive lower priority for resources than CFP units, the units that are available are presumably at a lower state of peacetime readiness. If the shortfall is in later-deploying units, say those after day 100, these limitations may be surmountable, as units can be assigned additional personnel, additional training can be accomplished, and equipment can be repaired in time to meet the deployment time. However, if there is a shortage of certain units in the earlier deployment requirements, there may not be sufficient

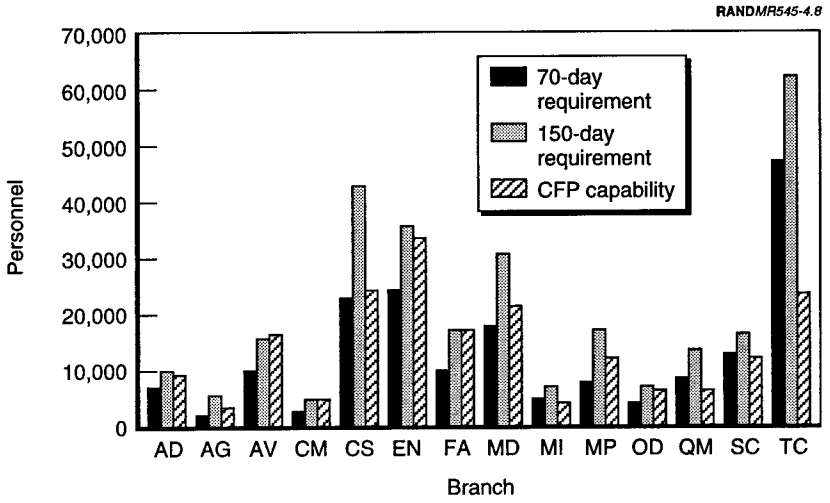

Figure 4.8—Does the CFP Have Correct Mix of Units?

time, as there was in ODS, to remedy problems in the units and prepare them for deployment when needed. We next look at the capability in the CFP to meet the early requirements as compared to the later-deploying requirements.

In Figure 4.8, we compare the units in the CFP to the units required in the scenario at two points in time. First, we show the requirements by branch at day 70. Second, we show the total requirements at day 150. Note that while four branches (military intelligence, quartermaster, signal, and transportation) have a shortfall at day 70, the transportation shortfall is far larger than all the others combined. Further, transportation also has by far the largest shortfall at day 150, when virtually all deployments have been completed. Large shortfalls also exist at day 150 in composite services, medical, and, to a lesser extent, quartermaster. As discussed in the last chapter, we believe these differences are due to the CFP being sized only to provide minimum essential support to Army units versus the need to provide a doctrinal support structure for both Army units and units of the other services as called for by the Army's WEAR. Since the Air Force and Marine units are likely to be in the theater very early, the WEAR commitment may require either active component units or very

ready reserve component units, as illustrated by the 70-day requirements in Figure 4.8 compared to the CFP capability. This would imply that the units need to be in the CFP if they are to be sufficiently ready in peacetime to meet an early deployment date.

REQUIREMENTS FOR NEARLY SIMULTANEOUS CONTINGENCIES

The BUR posits a requirement for U.S. forces to successfully prosecute two MRCs nearly simultaneously. It does not define "near" but implies that forces should be ready as needed. It also says that four to five Army divisions would provide adequate Army forces for any one contingency. We can use the force requirements defined earlier for each of the single contingencies in Southwest Asia and Northeast Asia. We will assume that, if possible, it is not desirable to move any of the initially required forces (the four to five divisions) from the first contingency to the second. Likewise we will assume it is desirable to have the force structure provide sufficient support forces to adequately support the deployed combat forces in the two theaters simultaneously.

We assume the first contingency has required the forces from the CONUS-based contingency corps consisting of the airborne division, air assault division, two heavy divisions, and two armored cavalry regiments. We will also assume that the forces in Europe (two divisions with two brigades each) and the ACR at the National Training Center at Fort Irwin are not available to meet the initial force requirements for either contingency. This would leave two light infantry divisions and one heavy division available for deployment. Three additional active component heavy brigades would also be in CONUS and presumably available for deployment.

Table 4.4 summarizes the available forces by type. This leaves three divisions and three additional brigades (total of 12 brigades) available for deployment to meet initial force requirements in a second contingency.[7] If the second contingency is Korea, then these forces

[7]Recall that the ACR at the NTC is in CONUS but not considered available for deployment.

Table 4.4

Availability of Active Component Combat Forces for Deployment

Brigades by Type	Total Number	Forward Presence	Deployed to First	Available Forces
Airborne	3		3	0
Air assault	3		3	0
Heavy	18	6	6	6
Light infantry	6			6
ACRs	3		2	0
Total	33	6	14	12

plus the two brigades forward deployed with the division in Korea would provide a combat force of four to five divisions.

Figure 4.9 depicts a combat force deployment to two contingencies, the first in Southwest Asia and the second in Korea. Deployments to the second begin about 40 days after deployments to the first. The 4-2/3 divisions complete the deployment to Southwest Asia. We assume in this example that sufficient airlift can be made available, even as deployments to Southwest Asia continue, to move the personnel and their equipment for the heavy brigade with prepositioned equipment in Korea and major elements of two or more infantry brigades. As sealift completes the initial deployment of both combat and support forces to Southwest Asia (by about day 50 to 60, as shown in our example), the shipping can move the additional light infantry and heavy brigade equipment to close the Northeast Asia combat forces by day 40. Note that Northeast Asia day 40 is also Southwest Asia day 80. The support forces are also moved by a combination of airlift and sealift as it becomes available. The combined requirements are shown in Figure 4.10.

If the combat forces can be deployed as described above and if transportation is available to move support forces as doctrine would call for, Figure 4.10 shows the forces required over time for the combined scenario. This timeline is probably optimistic for the support forces and may be optimistic for even the combat forces. Compared to ODS, of course, it is much faster. In ODS a combat force of about

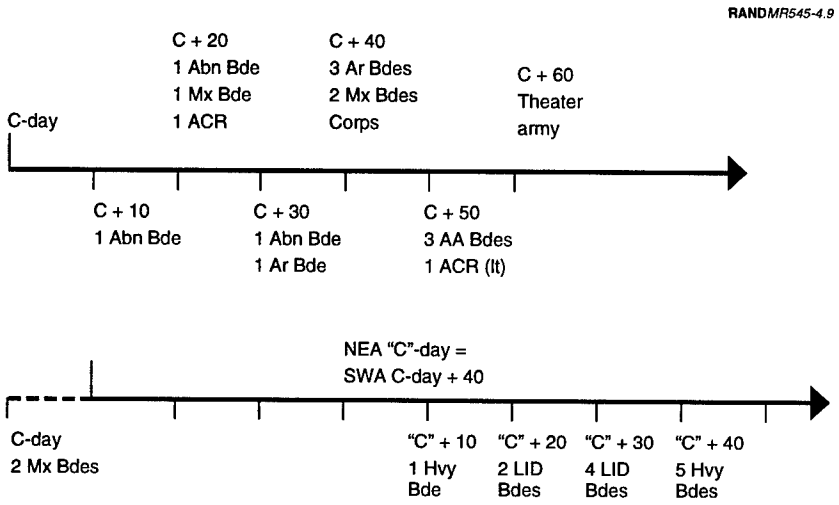

Figure 4.9—Nearly Simultaneous Contingencies

130,000 and a support force of 180,000 took almost 200 days to deploy. The MRS requirement discussed in Chapter Three, however, indicates a total deployed force of a little over 200,000 by day 50. This would imply transportation capable of deploying the force in Figure 4.10 in 100 days or so, as compared to 80 or 90 days. As we will discuss shortly, however, a difference of even 30 days does not have severe implications for the required force structure or the mix of active and reserve forces.

As discussed above, there are sufficient combat forces in the active component available to meet the total combat requirement for this scenario calling for minimum forces (four to five divisions) in each theater. Before we look at cases in which additional combat forces might be required and how they might be provided, we will examine the proposed support force structure implied by the BUR to see if it is sufficient to adequately support the minimum combat force requirements.

For our base case we will assume that mobilization or call-up authority occurs at C-day for the first contingency and that the pace of mobilization is sufficient to make reserve component support units

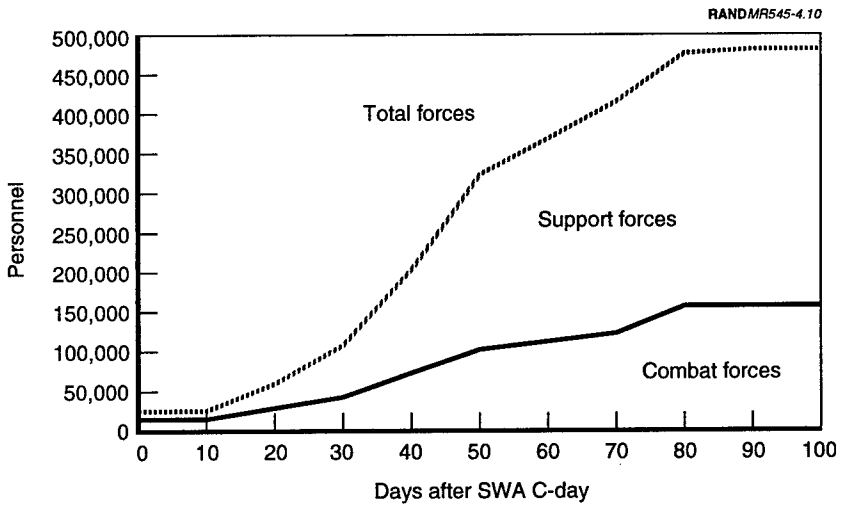

Figure 4.10—Forces For Nearly Simultaneous Contingencies

available for the second contingency. Thus, we will assume that no additional active component support force structure is required beyond that required to meet the early requirement for the first contingency and that forward stationed in Korea. We will assume, however, that the support forces in Europe, as we assumed for the combat forces in Europe, are not available for supporting the initial deployments to a contingency in Southwest Asia or Northeast Asia.

Given these assumptions, the active component must provide the same 59,000 for Southwest Asia as identified earlier and the 12,000 forward deployed in Korea shown in the Northeast Asia scenario above. As discussed above, this requirement is well within the current active component capability in the CFP. The remainder of the 326,000 support force requirement could be met by reserve component units if sufficient units are available in the force structure. Clearly the total requirement is beyond the capability of the total CFP, which only has 194,000. Thus the Army would have to draw on additional support force structure in the reserve components that is not in the CFP. Figure 4.11 compares the support force requirements by branch for the nearly simultaneous scenario case to the capabilities in the CFP.

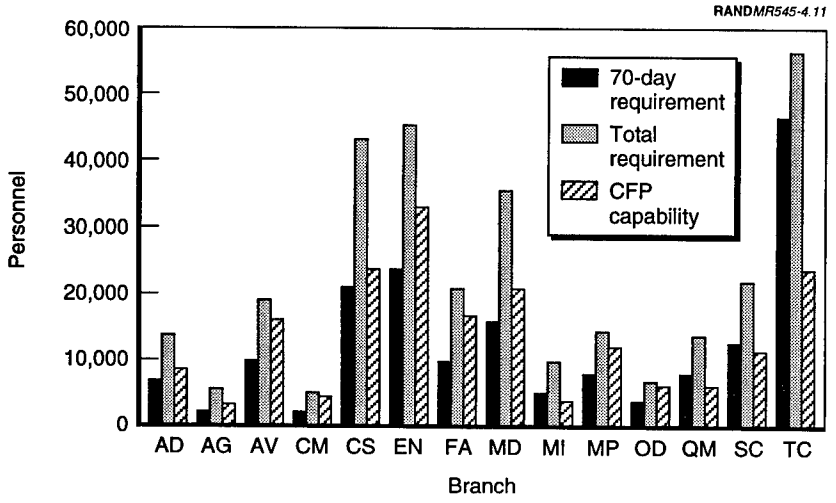

Figure 4.11—Nearly Simultaneous Scenario Requirements and CFP

Since the requirements in the first 70 days are dominated by the deployments to Southwest Asia, the results for this period are very much like those for the reinforced MRC case for the same period. Again, military intelligence, quartermaster, signal, and transportation show shortfalls, with transportation being by far the largest. In the case of the total requirement, the shortages are larger for most branches; however, both military police and transportation have a somewhat smaller shortage in the nearly simultaneous case than they do in the reinforced scenario example.

In either case, there are not enough support forces in the CFP to meet the total requirement in any branch, though some shortages may not be significant. For the additional support forces that are required from outside the CFP, three questions need to be addressed. Is the planned force structure large enough to support these requirements? Is the force structured in the correct types of units? Are the units likely to be available and ready to deploy when needed? As shown in Chapter Two, we estimate that there would be about 180,000 in support force structure beyond what has been identified in the CFP. If this turns out to be the case after the BUR force structure is fully defined, then the total support force of almost 375,000

would be sufficient in total numbers. Also, depending on how it is finally structured, it could be in the correct units. But even if it contains the correct units, there is a larger question as to the readiness of the units not in the CFP.

One of the objectives behind the CFP concept was to reduce the number of units that needed to be at a high state of readiness and consequently the amount of resources devoted to maintaining the personnel, equipment, and training readiness of the support units. Thus, by implication, units not in the CFP will be at a lower state of readiness. Even the CFP units in the reserve components find it difficult to meet their readiness goals.[8]

Personnel readiness—having sufficient numbers of qualified people available to mobilize and deploy—is the primary constraint for these types of units in meeting early-deployment requirements. In ODS such units were brought to required readiness levels through training and cross-leveling personnel between units and assigning additional personnel from other sources, but in that contingency, we must recall, there was plenty of time. Some support units did not need to deploy until four months after deployments had begun. Also, the Army enjoyed a very robust and ready force structure, both active and reserve, from which it could draw personnel and equipment and reallocate to the units that were needed. These two circumstances—time and robust resources—may very well not be available for future deployments.

Thus, given current planning assumptions, it is unlikely that sufficient support forces will be available and ready to deploy in the times indicated by our example. This remains the case even if we assume that the support force would deploy 30 days later due to transportation constraints. Thus, for the case where two nearly simultaneous contingencies require only the minimum of four to five divisions each of combat forces, the support force capability is marginal at best and will most likely be inadequate.

[8]As we noted earlier, less than a third of the priority support units participating in the Army's Bold Shift program in 1993 were able to meet their goals, and on average, the units reported that they would require about 20 days of postmobilization training before they would be prepared to deploy.

ALTERNATIVES FOR DEPLOYING ADDITIONAL FORCES

The two nearly simultaneous contingencies scenario considered above assumes that four to five divisions would be sufficient for each. What are the implications if four to five divisions are not sufficient for one of the contingencies? The BUR recognized the possibility that one contingency could require more than the four to five divisions. Even if four or five were felt to be adequate, we believe there would still be an inclination to send additional forces to the first contingency, if they were available and not obviously needed elsewhere, in order to reduce risk, shorten the time needed to successfully conclude the operation, and minimize casualties. What if the first contingency looked more like the reinforced contingency we examined at the beginning of this chapter and the adversary in the second waited until these additional forces were committed to the first? We might then have a scenario like Figure 4.12, in which the small second contingency in Northeast Asia looks like the second nearly simultaneous case described in Figure 4.9 but now occurs after the forces for a large contingency are committed to the first theater and cannot be redirected in time to a second.

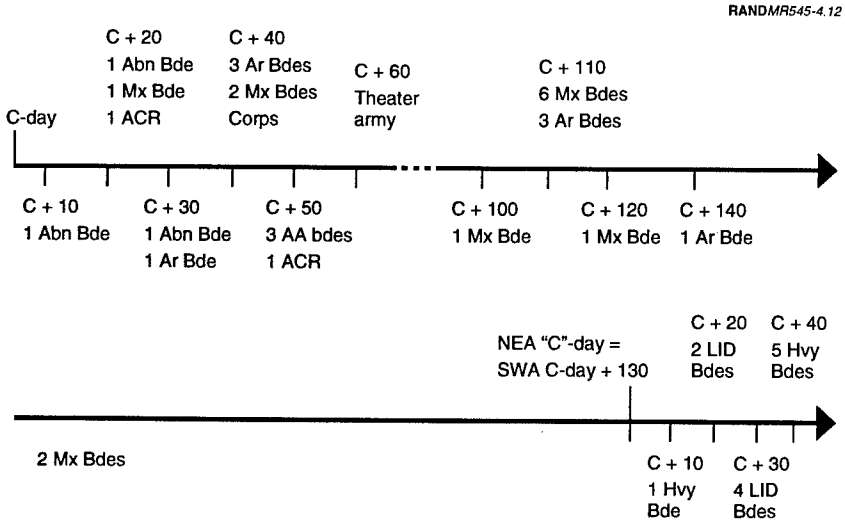

Figure 4.12—Large Contingency Followed by a Second Contingency

In terms of the total number of brigades, shown in Figure 4.13, the first contingency requires 27 brigades, as before, and the second requires an additional 14, a total of 41 brigades.

Since the active component only has a total of 34 brigades, as depicted in Figure 4.14, at least 7 of the enhanced brigades would be required to meet the total requirement. The issue is, how might this case arise, and how does the choice of deployments to the first affect the choices available for the second? After the initial 4-division force is deployed to the first contingency, 6 divisions are left in the BUR active force, with 15 enhanced brigades and 8 divisions in the National Guard.

How might these forces be used in a contingency operation (to fill the 27-brigade requirement in our example above, for instance) and what would be the implications should a second contingency occur? First, the eight combat divisions in the reserves are expected to take a year or more to prepare after mobilization before they would be available for deployment. These divisions then would be unlikely to enter into any contingency operations under circumstances similar to those described here. The fifteen enhanced brigades, however, were proposed with the expectation that they would be available and have a role in contingency operations should they be needed. The two divisions forward deployed in Europe could also be available

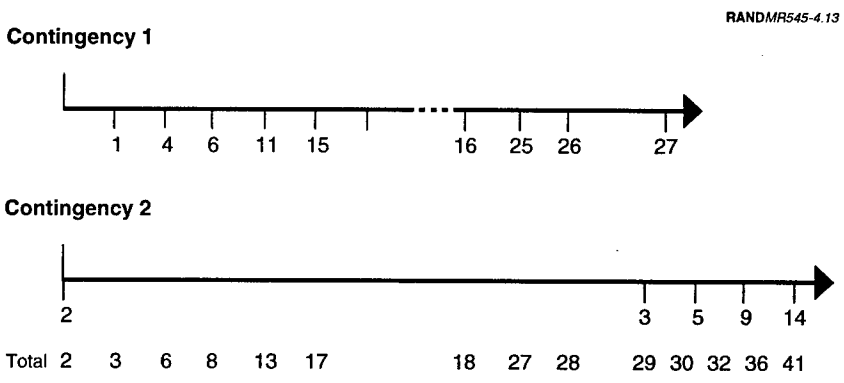

Figure 4.13—Total Brigades for Large Nearly Simultaneous Case

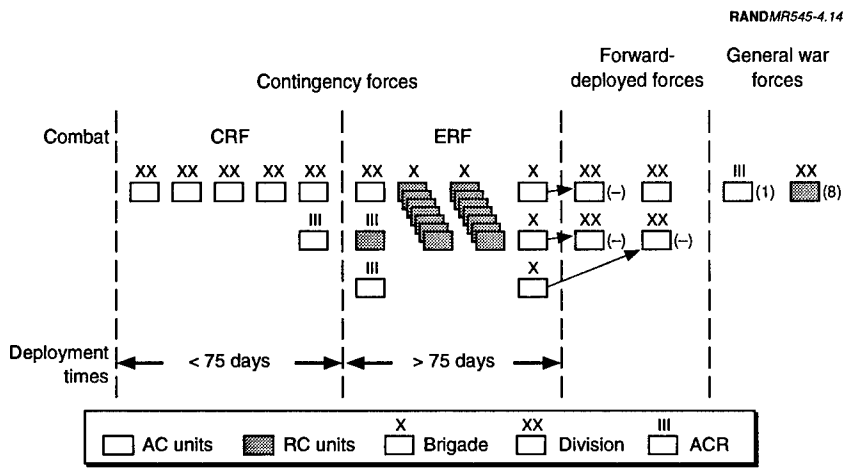

Figure 4.14—BUR Force Combat Structure and Availability

under some circumstances. Certainly any of the active combat units in CONUS should be considered available, although, as discussed, we do not include the ACR at the NTC in our deployable force.

We will briefly examine three cases to understand what issues need to be considered and what the implications might be of taking one course of action over another. The cases all assume that four additional division equivalents are needed in the first contingency. These are shown as brigades 16 through 27 in the upper portion of Figure 4.13. They may consist of whole divisions or combinations of divisions and separate brigades to total 12 brigades. The cases are examined in terms of the possible effect on successfully deploying a four- to five-division force to the second contingency (shown as brigades 3 through 14 in the lower portion of Figure 4.13) after the forces in each of the cases have been committed to the first contingency. Again, these may consist of whole divisions, individual brigades, or a combination of divisions and individual brigades. The specific cases are as follows:

- A. Deploy the three active divisions from CONUS and one division from Europe, with its CONUS-based brigade, to the first contingency as brigades 16 through 27.

- B. Deploy two European divisions and their CONUS-based brigades plus two active divisions from CONUS as brigades 16 through 27.
- C. Deploy ARNG enhanced brigades as part or all of brigades 16 through 27.

Case A rests on the hypothesis that after deployment of forces to a contingency begins, there is a need for additional forces, and the rest of the world is quiet. If we assume there is no perceived immediate need for the three CONUS-based active divisions elsewhere, then their deployment to a contingency will almost certainly be considered. They would be the most immediately available and probably the easiest to deploy politically and militarily, compared with taking all forces from Europe or calling up enhanced brigades and preparing them for deployment. It would, however, result in all CONUS-based active divisions being deployed. Although there would be fifteen enhanced guard brigades potentially available, there would be no readily available CONUS divisional structure to provide command and control or divisional support should the force need to deploy. If the second contingency were Korea, there would be only one division headquarters to control four to five divisions' worth of brigades. An option would be to deploy the remaining European division to the second contingency.

There seem to be two fundamentally different situations: one where all the forces in Europe are available for deployment outside Europe to either the first or second contingency, and one where they are not. They may not be deployable due to either political or military considerations. If all are available for use outside Europe, then this option is not unlike our second case, where we assume that all the European divisions are available for the first contingency.

Case B is similar to the ODS case, in that during the Gulf War the U.S. Army in Europe deployed a corps and combat divisions to Saudi Arabia. In that case, the units were ready to depart Europe for the Gulf in 42 days after alert. Thus the European divisions, if they could be made available for use outside Europe, could be ready to deploy about as fast as the CONUS active divisions and more quickly than the enhanced brigades. This option has the advantage of providing additional heavy divisions to the first contingency while preserving a

capability to immediately deploy one or more divisions from CONUS to a second contingency. It also has the advantage that it would leave active combat structure in CONUS that could be used to help train up and prepare enhanced brigades for later deployment should they be needed for either the first or second contingency. If desirable, one or more of the enhanced brigades could be deployed to Europe to maintain a U.S. combat force presence. The brigade could continue its training in Europe, though probably not with the same degree of support it could receive in CONUS.

One of the missions or roles envisioned for the enhanced brigades is to provide a capability to augment active forces for contingency operations. Case C examines use of the enhanced brigades in this context. Use of the enhanced brigades in contingency operations rests on two very basic issues: their availability and their readiness or capability. The availability of reserve component units to deploy, unlike active component units, depends upon a decision by the President to call the units to active duty.[9] This can be under his Presidential Selected Reserve Call-up authority or his authority to mobilize the reserve components under partial mobilization.[10]

A call-up of reserve forces raises both domestic political and international considerations that might either delay or preclude a decision to mobilize reserve units. After ODS, however, it is likely that any major regional contingency would result in a decision to call reserve forces, although circumstances might delay such a call-up and impede the timely availability of reserve component forces. This is particularly the case for the enhanced brigades, where the decision would need to be made well before the units would have to be in the theater, in order to allow time for adequate training and readiness improvement. It might be difficult to accept the necessity (and the

[9]Congress might also provide authority for full mobilization; however, this is not likely unless the President were to request such authority.

[10]The President has a number of avenues under which he can call reserve component units and personnel to active service. For ODS, for example, the President first exercised his authority to call up to 200,000 selected reservists under 10 USC, Section 673b. Later, a national emergency was declared and additional authority was granted for partial mobilization. The latter permits the mobilization of up to one million reservists for up to two years.

political implications) of mobilization if the need for the units was not immediate and compelling. In the case of the enhanced brigades, the Army goal is to have the units ready to begin deployment in 90 days after mobilization. Even if this goal is achieved (and, as discussed earlier, we are not optimistic that it can be), it implies calling the units to active service almost four months before they have to be in the theater. Nevertheless, the consequences of not making the units available may arguably be compelling in those cases where their availability would be critical to the outcome of the contingency.

Another issue is how these brigades would fit into the command and control structure in a contingency theater. As discussed in case A, there are situations in which a number of brigades could be deployed into a contingency where there are too few Army divisions to provide divisional support and where many brigades would essentially be operating as separate brigades under a corps headquarters. This might present a more troublesome operational constraint than a 30-day delay in brigade train-up and deployment. This issue needs more analysis and doctrinal examination than we have done or seen.

Regardless of where the combat forces come from, the support force required for the larger contingency with an additional corps and three divisions of combat structure will add approximately another 100,000 people to the support force requirement shown in our earlier two-contingency example. Support units would not be available in either the numbers or at the readiness levels needed to support the deployed combat force. The requirement (300,000 for the first scenario and 147,000 for the second) could not be met by the entire support force structure (totaling 428,000 for the three components) as currently planned. In addition, over half would have to come from outside the CFP (since the CFP totals only 193,500), and as discussed earlier, these non-CFP units are expected to be at a lower readiness level. While the ARNG, for example, plans to man its high-priority CFP units at 95 percent, it will man the lower-priority units at 85 percent (Army National Guard, undated). In addition, as we discussed earlier, these types of units in the reserve components tend to have only about 75 percent of their personnel fully qualified in their as-

signed job skills.[11] Thus the readiness of these support forces is in doubt, if they are to deploy on the schedule in our reinforced scenario.

[11]An option in addition to those discussed above for both combat and support forces would be to use whatever forces are required to successfully bring the first contingency to a close and then move forces from the first to the second to reinforce whatever forces had been deployed earlier. TRADOC recently reported on a study that examined this issue and determined that it would take about 50 days to reconstitute and redeploy a heavy division from Southwest Asia to Northeast Asia (TRADOC Analysis Center, undated). Support forces could also be redeployed. We have not examined this option, but rather have assumed the need to respond to two contingencies without waiting for the first to be concluded successfully.

Chapter Five

OTHER CONSIDERATIONS AND MISSION REQUIREMENTS

As demanding as the requirements for the MRCs may be, the Army does not have the luxury of focusing all of its attention and peacetime resources on preparing for these contingencies. It must also meet its other peacetime responsibilities, such as keeping forces stationed overseas to maintain forward presence and to prepare for other missions it may be given, such as peacekeeping and humanitarian assistance. For example on August 5, 1994, the Army, in addition to the forces permanently stationed overseas, had 15,941 soldiers performing missions in 105 countries (Department of the Army, 1994b). These deployments included an infantry battalion in the Sinai as part of the Multinational Force and Observers, medical personnel supporting a hospital in Moldova, an air defense battalion reinforcing Korea, and 573 soldiers providing humanitarian assistance in Rwanda. Many in the Army believe the increasing pace of peacetime operations is threatening its ability to meet the requirements of the two-MRC scenario (Department of the Army, 1994a).

Evaluating the demands of such operations is beyond the scope of this report, but they evidently need to be considered in future comprehensive assessments of defense capability. Below we outline the primary considerations that ought to be taken into account when evaluating the joint demands of MRCs and other missions.

FORWARD PRESENCE

As discussed in Chapter Two, current planning envisions the Army keeping elements of at least three divisions overseas (two in Europe and one in Korea) for the foreseeable future. If these divisions are

available for missions outside of their respective theaters, the overseas presence mission does not place as great a burden on Army planning and flexibility for executing contingency operations as would be the case if they were not. As discussed earlier, we have considered that the divisions in Europe are much more likely to be available for contingencies outside Europe than is the case with the division in Korea. We cannot envision a situation in the near future in which the forces in Korea would be deployed outside Korea.

The situation is somewhat different for the brigade at the NTC. The deployment of the NTC brigade would terminate the capability of the NTC to function and curtail any rotations of active component or, perhaps more importantly, reserve component units like the enhanced brigades through a NTC experience before deployment to combat. While such rotations are not considered essential, they were planned for the brigades called for ODS and are considered by many to be extremely desirable. For this reason alone, we have not considered the NTC brigade as part of the deployable combat force for major regional contingencies. The nondeployability of the NTC brigade does not seem to pose any constraints upon the Army's ability to meet its contingency requirements.

"Planned" forward presence can be considered in contingency planning and thus may not severely constrain options when a contingency occurs. However, military options may be severely limited by unplanned forward presence (such as keeping units in Panama longer than expected after Just Cause, or deployments of Patriot units to Korea) or by peacetime operations away from a unit's home station. Further, such activity may interfere with normal peacetime training and thus reduce the Army's ability to maintain adequate forces ready to deploy on short notice to a major regional contingency.

Repeated deployments and overseas tours for limited operations may also, over the longer term, affect the Army's ability to retain highly qualified and trained personnel. The latter may affect selected types of units and skills even though the overall activity level for the Army as a whole is very low. Two that are often cited are military police and, more recently, Patriot units. Unplanned demands for these types of units have kept many of their personnel deployed on almost a continuous basis. These situations may become even more preva-

lent in the future if the BUR proves correct in suggesting that the new dangers will call for greater participation of Army units in operations short of a major regional contingency.

OPERATIONS OTHER THAN WAR

The BUR laid out a number of specific objectives for the armed services that could demand significant Army involvement in military operations other than war (MOOTW).[1] These objectives, presented in the report on the Bottom-Up Review, included the following:

- "Prepare U.S. forces to participate effectively in multilateral peace enforcement and unilateral intervention operations."
- "Use military-to-military contacts to help foster democratic values in other countries."
- "Protect fledgling democracies from subversion and external threats."

OOTW are not new to the Army. It has been conducting these types of operations over its entire history. Between January 1975 and June 1990 the Army participated in 49 operations each involving 50 or more CONUS-based U.S. Army soldiers (U.S. Army Concepts Analysis Agency, 1991). Twenty-two of the operations were overseas and involved 7,252,794 man-days (77.4 percent of the total), and 27 were conducted in CONUS and involved 2,117,448 man-days (22.6 percent of the total).[2] Table 5.1 shows the proportion of the total man-days identified by type of operation.

Just Cause, a combat operation, was the largest of these operations in terms of the number of soldiers involved at any one time with 10,566 soldiers deployed for a total of 443,772 man-days. The largest operation, however, in terms of the total number of soldier man-days involved over the period was the Multinational Force and Observers (MFO) in the Sinai; this was a peacekeeping operation that, from March 1982 to March 1990, involved 15,991 soldiers for a total of

[1]See the report on the Bottom-Up Review (Department of Defense, 1993) for a complete discussion of the objectives.

[2]One man-day is one soldier for one day.

Table 5.1

Employment of U.S. Army Forces (1975 to 1990)

Operation Type	Number of Operations	Percentage of Total Man-days
OCONUS		
Combat	3	5.5
Peacekeeping	1	30.0
Show of force	1	0.5
Security augmentation	6	11.0
Nation building	7	21.9
Humanitarian assistance	4	8.5
Total	22	
CONUS		
Disaster assistance	18	4.8
Support to law enforcement	4	2.7
Refugee resettlement	5	15.1
Total	27	

SOURCE: U.S. Army Concepts Analysis Agency, 1991.

2,812,589 man-days. The second largest was a nation-building operation in Honduras (Joint Task Force Bravo) that, from August 1984 to June 1990, involved 11,168 soldiers for 1,323,323 man-days. The reserve components regularly deploy on overseas training missions that involve construction activities and medical support for people in foreign countries. These have been relatively small operations, however, and most have not lasted longer than a series of unit rotations.

The Army recognized in a recent publication describing the conceptual foundations for the conduct of future operations into the 21st century that strategic interests have increased both the number and the range of OOTW the Army will be required to perform in the future, and that OOTW and low-intensity conflicts will comprise most of the conflicts involving the Army (TRADOC Analysis Center, undated). The BUR envisioned the possibility of larger interventions and set a level of up to two Army divisions, Marine and Air Force units, and support forces totaling 50,000 combat and support personnel (Department of Defense, 1993). Such a large deployment from limited CONUS-based forces would severely limit the Army's ability to react quickly to an MRC. The impact would be even more

severe if the intervention were to extend over a period when fresh units would have to be rotated into the theater.

Although these operations are not new, in the past they were not explicitly considered in force structure planning or allocation. The size of the Army and its planned employment permitted these peacetime operations to be treated as lesser-included cases. That is, if forces were structured and trained for the worst case—worldwide conflict with the Soviet Union—then adequate forces would always be available for these small and rather infrequent operations other than war.

That situation is not likely to remain the case as the Army gets smaller and has fewer resources to allocate across all of its responsibilities. In many ways, today's Army must maintain a more ready and capable force than in the past, if it is to be always prepared to respond to a fast-breaking and demanding MRC. As we have seen, the Army would probably be able to field adequate combat forces for the MRCs, but it would probably not be able to field support forces in the number and at the readiness levels called for by its doctrine and force planning assumptions. The addition of OOTW requirements is likely to exacerbate that support force shortfall. For these reasons, a full assessment of Army force structure and active/reserve mix needs to consider OOTW requirements as well as those of contingencies.

Chapter Six

CONCLUSIONS

The analysis presented in this report has focused almost exclusively on questions about the adequacy of the evolving Army force structure, both active and reserve, to carry out Army missions and responsibilities associated with MRCs. Our review shows that under the assumption that only four to five divisions are needed for each major regional contingency, the BUR combat force is adequate even when judged against a scenario for two nearly simultaneous contingencies of this size. In contrast, it does not appear that the current planned support force structure would provide the number of units at the needed readiness level to support the same simultaneous contingencies. The CFP would support a single modest-sized contingency but not two nearly simultaneous contingencies. While support units other than those in the CFP do exist in the general war forces, they may not, given their priority for resources, be ready to deploy in time.

SUPPORT FORCES

For a long time the Army has been heavily dependent on the reserve components for combat support and combat service support units at echelons above division to support active Army combat forces in all but the smallest of combat operations. In ODS, the first call-up of reserve forces in more than two decades, the Army deployed some 70,000 guardsmen and reservists in this role with good results. Since ODS, however, the Army has reduced the number of units and personnel and made changes in the way reserve component units are aligned and in the resourcing priorities.

The Army has identified and selected a pool of units (CFP units) to deploy with the combat forces and provide the support units required at echelons above division. As discussed in Chapter Two and depicted in Figure 2.2, the CFP is intended, along with forward-deployed forces, to support the active Army combat force along with any augmentation from the ARNG enhanced brigades. The force structure also includes additional units as part of the general war structure, but these units will receive lesser priority for resources, will be at a reduced readiness level, and will require additional resources and training after mobilization before they can be ready for deployment. The available support forces (CFP and Total CS and CSS) are shown in comparison to MRC requirements in Figure 6.1.

Figure 6.1 shows the support force requirements for three potential MRC cases and under two mobilization scenarios. The line labeled "MRC" depicts the support force requirements for a single Southwest Asia MRC that requires no more than four to five divisions as discussed in Section 3. The point labeled "M = C" shows the case where mobilization occurs at C-day. The active component provides about 37,000 of the total 180,000-person requirement, while the reserve components can provide the remaining 143,000. If mobilization is

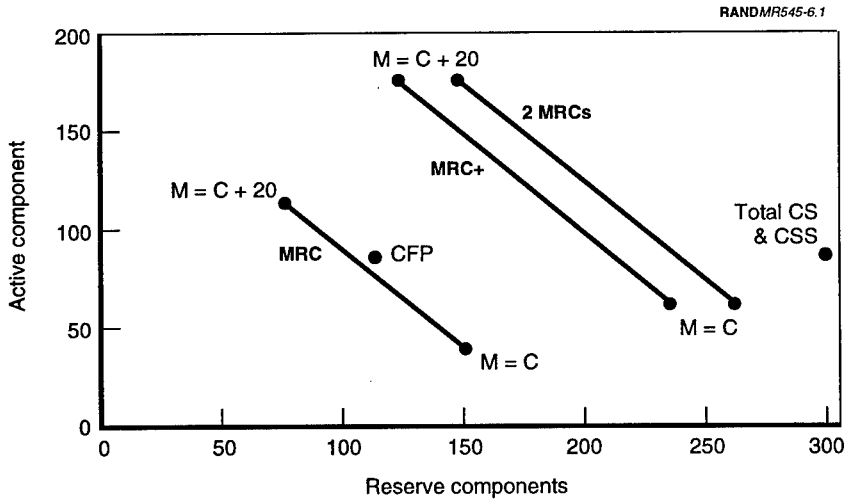

Figure 6.1—Available Support Forces Compared to MRC Requirements

delayed for twenty days and occurs at C + 20, as shown by the point labeled "M = C + 20," the reserve components can be expected to meet only about 70,000 of the requirement with the active needing to provide 110,000 support personnel.

The point labeled "CFP" depicts the current mix of active and reserve component units, totaling about 77,600 active and 113,700 reserve component personnel. Note that the mix of total personnel is roughly matched to the requirements that would likely exist if mobilization were to occur at about C + 10. If mobilization were delayed until C + 20, as was the case in ODS, there would not be sufficient active forces in the CFP to meet the doctrinal requirement. For the planned force to provide the doctrinal EAD and EAC support structure in terms of size and mix for a single MRC requiring four to five Army divisions, reserve component support units must be made available at or very soon after initial deployment of combat forces.

As discussed in Chapter Three, however, there is a mismatch in the type of units, with some shortages in the CFP of units from the transportation, quartermaster, military intelligence, medical, adjutant general, and composite services branches. We believe the shortages, particularly in transportation and quartermaster, are due largely to the CFP's being sized to support Army units but not to meet the Army's wartime executive agency requirement (WEAR) to support the other services. These executive agency requirements could be as large as 20,000 to 60,000, depending on the size of the deployment and the availability of contract or host nation support.

For an MRC requiring reinforcement of combat (up to eight divisions) and support forces (labeled "MRC+" in Figure 6.1) or a near-simultaneous scenario case (labeled "2 MRCs" in Figure 6.1) as discussed in Chapter Four, the Army would need to draw on support units from the general war forces. As indicated by the point labeled "Total CS & CSS," this could make an additional 188,900 reserve component personnel available (recall that virtually all CONUS-based active component support units are in the CFP). Even if it is assumed that many of these general war force units would be of the correct type, it is not at all certain they could be readied for deployment in time to meet the in-theater requirements, given their lower priority for resources in peacetime.

COMBAT FORCES

For the MRCs called for by the BUR (contingencies requiring four to five divisions each and possibly two such contingencies occurring nearly simultaneously), the proposed Army combat force structure (ten active divisions with three brigades each), augmented by up to fifteen ARNG enhanced brigades if needed, is adequate. This is clearly the case if active divisions forward deployed in Europe are available for out-of-theater contingencies and if ARNG enhanced brigades can be available for deployment in about 90 days, as the Army planned.

If more than four to five divisions are required for each MRC, the BUR combat force may not be adequate if the additional forces are required before the enhanced brigades can be prepared for deployment. The goal underlying the BUR force is that enhanced brigades be ready to begin deploying 90 days after being called to active service. Previous RAND analysis indicates that this may be extremely difficult to achieve.

The time required to get the brigades to the theater may be reduced by alternative strategies and resource investments that would prepare them more quickly. For example, the Army might use additional equipment to eliminate the preparation and shipping time for getting brigades' equipment to the theater.

On the other hand, for many scenarios a delay of 40 days in getting the brigades to the theater may not be critically important. For example, if the brigades are used to replace active brigades as part of a planned rotation of units in a stalemated situation, a train-up time of 130 days versus 90 days is not likely to be important. If the brigades are to be used as part of an overwhelming force for a planned offensive operation, a delay of 40 days in initiating the offensive also may not be critical.

There is also the question of the cost for ensuring that the units can be ready in 90 days (assuming it is feasible) versus that required for 130 days. The incremental cost to maintain the higher readiness level required in peacetime and/or the peacetime cost to maintain the required postmobilization training capability may be significantly more than is currently available or planned. The issue of postmobilization resources and the effect of alternative resource

strategies on brigade availability is the subject of ongoing Arroyo Center research.

MRC requirements have been examined here without regard to other commitments the Army must meet, such as conducting operations other than war. As discussed in the previous chapter, the BUR laid out a number of specific objectives for operations other than war that could demand significant Army involvement. In ongoing research we are looking at OOTW in light of expected demands, to determine their possible effects on the needed mix and organization of Army active and reserve component units.

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